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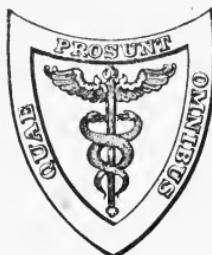
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EPITOME
OF
SKIN DISEASES,
WITH FORMULÆ,
FOR STUDENTS AND PRACTITIONERS.

BY THE LATE
TILBURY FOX, M.D., F.R.C.P.,
" AND
BY T. COLCOTT FOX M.B., M.R.C.P.

THIRD AMERICAN EDITION, REVISED AND WITH ADDITIONS.

BY
T. COLCOTT FOX, B.A. (CANTAB.), M.B. (LOND.),
PHYSICIAN FOR DISEASES OF THE SKIN TO THE WESTMINSTER HOSPITAL; PHYSICIAN
TO THE SKIN DEPARTMENTS OF THE NORTHWEST LONDON HOSPITAL, AND TO
THE BELL STREET DISPENSARY FOR CHILDREN; ASSISTANT PHYSICIAN
TO THE VICTORIA HOSPITAL FOR CHILDREN; LATE PHYSICIAN
TO THE ST. GEORGE'S AND ST. JAMES'S DISPENSARY; AND
MEDICAL SUPERINTENDENT OF THE FULHAM
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AMERICAN PUBLISHER'S NOTICE.

THE favorable reception accorded to this work on both sides of the Atlantic, would seem to show that it has realized the object with which it was prepared — to afford assistance to the student in his early study of dermatology, and to serve as a manual for ready reference by the practitioner in his daily practice. For this latter purpose it has been specially adapted by means of the references made in the sections on treatment to the formulæ at the end of the volume.

To increase its interest for American readers, there has been introduced, on page 31, the classification of Dermal Diseases adopted by the AMERICAN DERMATOLOGICAL ASSOCIATION.

PHILADELPHIA, November, 1883.

PREFACE TO THIRD EDITION.

Not long after the issue of the Second Edition, Dr. Tilbury Fox succumbed to an affection from which he had long and patiently suffered. I need hardly say that the favorable reception of the Epitome, by the profession in America, was a source of the greatest pleasure to him, for his many valued friends there had experience of his enthusiasm for the special branch of medicine at which he worked so hard.

The continued kind reception of the little work, and the desire to honor my brother's memory, have inspired me to spare no pains to make the present long-delayed edition increasingly useful and acceptable. Much has been amended and rewritten, and the work brought into the closest conformity with the edition which finds such favorable acceptance in Great Britain.

That the Epitome may continue to find a place in a country which claims such a large proportion of earnest and eminent workers in Dermatology is the hope of

T. COLCOTT FOX.

14 HARLEY STREET, LONDON,



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EPITOME OF SKIN DISEASES.

PART I.

GENERAL OBSERVATIONS ON SKIN DISEASES.

SECTION I.

INDICATIONS FOR THE STUDY OF SKIN DISEASES.

IN order that the clinical study and the therapeutic management of the skin may be most successfully prosecuted, one or two very important considerations, concerning, on the one hand, the general nature of cutaneous changes, and, on the other hand, the mode of examining those suffering from these maladies, must never be lost sight of.

First. *As to the General Character of Skin Diseases.—* There is nothing really special in the pathology of these maladies. It has been a common remark that the study of skin diseases is bewildering on account, amongst other reasons, of the infinite variety of forms and aspects assumed by eruptions, and consequently the multitudinous names given thereto, names so entirely unlike those applied to diseased changes in other parts of the body as to lend material support to a belief in an essential peculiarity in the nature of diseases of the skin. But recent researches in cutaneous pathology have certainly cleared the way to

a more correct knowledge of skin affections. Difficulties are rapidly vanishing, especially by the breaking down of many artificial distinctions which have so multiplied varieties and terms, and which are in course of being shown to have no foundation in fact. It is also now manifest that the morbid processes that take place in the skin are similar to those observed in other parts of the body. Indeed, it is yearly becoming more and more possible to group skin diseases according to their pathological affinities exactly on the same plan as other diseases are classified in this respect. It is a noteworthy and satisfactory circumstance that the student of to-day, who is compelled to acquire pathological knowledge over a wide field, discovers that the study of skin diseases is rendered comparatively easy because of the general similarity which has now been demonstrated between the facts of general and skin pathology. The student does not find himself dealing with strange topics or data, but recognizes, in morbid action, familiar appearances, changes and causes, when he turns from his study of the diseased states of other organs to deal specially with those of the integument in its several parts. It is all-important, then, to understand that there is nothing essentially special, beyond the existence of special structures, in the details of cutaneous pathological changes as compared with those which occur in other parts.

Secondly. As to the Mode of Examining Skin Diseases.—In diagnosing eruptions a great error is commonly committed by attempting to recognize them from a too partial examination of the phenomena they present either to the senses of the practitioner or in their histories. Practitioners and students, as a rule, content themselves with diagnosing from sight alone; they make a venture at the diagnosis from the aspect alone, but only to be often significantly wrong. In some, and indeed many cases, no doubt

the nature of the disease can be made out correctly at once from inspection, even when that is of a very partial kind, inasmuch as the eruption assumes from the outset, and preserves throughout its course, its typical characters. In other instances, on the contrary, this is difficult or impossible without careful inspection of many parts of the disease in several localities in a given patient, or an inquiry into the previous history of its course. For many skin diseases are made up of stages, and, at the time of observation, these may vary greatly in different parts, whilst the typical characters may not be distinctly recognizable, or may be masked by accidental concomitants. And, further, it is important to observe that *parts only* or *stages* of different diseases often present a likeness to one another, and may convey a very imperfect picture of the disease. To avoid error, then, the diagnosis should be based upon the phenomena or features presented by any given disease as a whole, and not upon any particular portion of that disease.

It follows, therefore, from what has just been said, that there are two useful rules to be observed in making a diagnosis. The first is this :

All diseased places, or as many as possible, in a patient should be carefully examined, and not one only, or one here and there; for the simple reason that the eruption may be at very different stages of development, and therefore present divers aspects, in different localities in the same patient.

The object of this examination is to trace out the origin and course of the disease, and to link together the various stages into a complete history, which will answer in its clinical features to an authoritative standard description of the disease, whatever it may be. During this examination, special attention should be directed to the character of the newest developments, and, if there be none of the kind, to the extending edge of patches, which always constitutes

the most recently developed parts of the disease, and, therefore, best portrays the primary lesion. Complications are also more likely to be recognized by attention to this point.

The second rule is this:

Where the earlier stages in any given case are not recognizable, careful inquiry should be made into the history, by interrogation of the patient, as to the changes that have occurred before the disease came under observation, with a view to discover its nature.

Very frequently no fresh developments of the eruption are taking place at the time of observation, and no extension of a given patch has occurred for some time. The malady has, in fact, become chronic and indolent, and, moreover, has lost its typical features, oftentimes. The only way of making a diagnosis under these circumstances is by observing this second rule. For example, eczema is characterized mainly by a considerable serous exudation which discharges from the surface, but the discharging stage has frequently been passed before the case comes under the care of a medical man, and the disease may present a dry and scaly appearance, and be readily mistaken for psoriasis—a not infrequent error. Again, a disease essentially papular may be masked by secondary exudation and incrustation, and its true nature may therefore be overlooked, unless its history be carefully inquired into.

At the same time, *the extent of distribution, the sites involved, the pattern of the eruption, and its mode of evolution and spread* should be noted. Many diseases have favorite sites, a knowledge of which is very necessary; others tend to assume a particular configuration, as lichen scrofulosum; and others, again, spread in a special way, as ringworm.

By the observance of these rules, the observer ascertains what are the elementary lesions, and the characters of the different stages of the several eruptions; and he should

form with these a picture of the malady, and so make an accurate diagnosis, just as the child with his dissected puzzle puts together the animal or landscape, bit by bit, to form the desired whole. It is well to get into the habit of diagnosing a disease both by its positive characters and by the exclusion of all other possible affections.

Thirdly. *As regards Complications.*—It should never be forgotten that two or more eruptions may occur together, and in this case their several characters will be mingled in varying proportions. Examples of this are found in the concurrence of urticaria and eczema, of syphilitic rash and chloasma, of lichen and urticaria, of ecthyma and the dermatitis of scabies, of purpura and urticaria, of leprosy and scabies, and so on. The possibility of the coexistence of two diseases should never be lost sight of. Multiformity of eruption is, however, by no means sufficient evidence—although it is suggestive—of the coexistence of two or more distinct diseases. There are three diseases, however, which are essentially multiform in eruptive character. They are eczema, scabies, and syphilis. Supposing, therefore, that neither of these diseases is present, multiformity of eruption usually indicates the co-existence of two or more eruptions.

Fourthly. *As regards Modifications of Eruptions.*—There are many influences which modify the aspect and the general character and behavior of skin diseases, which should be taken into account in dealing with their treatment. It is not only necessary that the physician should recognize any particular form and kind of skin eruption, but that he should appreciate the part played by various concomitant conditions in each individual, which modify the character and the duration of the particular disease present. There are various diatheses, special states of the

blood, of nerve, and of tissue which specially tend to induce an unusual amount of inflammatory action, or favor undue pus formation, or disorder of sensation, and the like, to which due consideration must be given. The evil influences of such conditions must be thwarted, so as to pave the way for the proper action of curative measures directed against the disease as a disease in the abstract.

A few useful particulars or hints may not inappropriately be given here. Diseases of the skin are spread or take on an inflammatory character, or the changes in the skin are exaggerated, by exposure to all irritating agencies, such as heat, cold, scratching, the contact of acrid substances of all kinds, as in the handling of lime, sugar, soda, respectively, by bricklayers, grocers, and washerwomen. So, too, an inflammatory aspect is given to eruptions by acridities in the blood, as in gouty or rheumatic subjects, in dyspeptics, and in those in whom the bile-acids, sugar, or retained effete matters are present in undue amount in the blood. Eruptions in strumous subjects and in children are attended by an amount of pus formation which is unusual in non-strumous subjects and in adults. Undue chronicity is occasioned oftentimes by the existence of nervous or general debility; for Nature then lacks the natural recuperative power, and cannot exert it in aid of the cure.

The questions of *age, sex, occupation, mode of life*, and *the general medical history* of the patient have to be considered, and will be incidentally referred to in other places, but due attention to the four indications already discussed will be found of essential importance in the successful diagnosis and treatment of a skin disease. It may be observed, however, as regards age, that one essential difference between the cutaneous diseases of the young as compared with those occurring in the middle-aged and old, consists in the fact that the former are often the result of imperfect digestion

and assimilation, whereas the latter are induced by mal-influences connected with the habits and occupations and wear and tear of adult life, and degeneration of structure in the old, and are *modified* by a number of functional and organic diseases of internal organs, which are conspicuous by their absence in the young.

SECTION II.

ELEMENTARY LESIONS.

THE elementary lesions are the types of external form and aspect presented by skin eruptions, and with these the student is expected to be accurately acquainted. The brief description here given will constitute a general outline of the pathology of the skin; but it must be remembered that there is no hard-and-fast line to be drawn between some of the lesions, however necessary their definition may be for clinical purposes.

Maculæ may be defined as any alteration in the color of a circumscribed area of skin from whatever cause, as long as it is unattended by any marked depression or elevation of the surface. Thus, they may be caused by—

- (a) Slight congestion or superficial inflammation, as in erythema simplex, the erythematous syphilitide and lupus, and macular leprosy. Tiny points are called *punctæ*, the widely diffused stains or blushes *discolorations*.
- (b) Extravasations of blood into the skin, as in purpura. Such extravasations are very frequently a secondary feature in eruptions.
- (c) Deposition or removal of pigment, which principally occurs in the lower rete layers, as in

ephelides or freckles, chloasma, leucoderma, and leprosy. The deposition of pigment very often follows the prolonged congestion or inflammation of a part, or the resolution of a new growth from the breaking up of red blood-corpuscles, as after a blister, urticaria, lichen planus, and syphilides.

- (d) Chemical changes from any external or internal source—*e. g.*, iodine, nitrate of silver, bile-acids.
- (e) The growth of vegetable parasites in the skin, as in *tinea versicolor*.
- (f) New growths or chronic inflammations of the corium, as in *nævi* or *morpheæ*.

Wheals or Pomphi are mostly oval or rounded in outline (irregular by confluence), or ringed, evanescent swellings, brought about by acute transient hyperæmia and oedema of the skin in localized areas. Wheals are pinkish in color, but the amount of serous fluid effused is frequently sufficient to obscure the redness in the central parts, hence they are sometimes described as whitish elevations with or without a pinkish bordering. They are typically portrayed in the effects of the sting of the nettle. It is supposed they are caused by the sudden dilatation, under nervous influence, of a bunch of capillary vessels, which quickly regain their tonicity except in rare cases. Heat and itching or stinging or great tingling accompany them.

Papules or Pimples are solid elevations of the skin, mostly of rounded outline, acuminate, or flat-topped, and varying in size from punctæ up to about a split pea, until, in fact, the term “tubercle” is applicable. They may be due to hyperæmia of little groups of papillæ, or very commonly to inflammatory exudation; and the papillæ in both cases may be specially involved around the sweat ducts, as

in miliaria and strophulus; or sebaceous follicles, as in acne; or the hair-follicles, as in sycosis, and then a hair protrudes through the centre of the papule. The inflammatory exudation may be mainly serous as in eczema, or more cellular and plastic as in syphilis and leprosy, or associated markedly with hypertrophic changes in the epithelial cells as in lichen planus and psoriasis. In the latter affection and in warts the papillary changes seem to be primary. Papules may also be formed by plugging of the sebaceous glands by altered sebum as in milium, or by the collection of exuviae in the mouth of the follicles as in lichen or keratosis pilaris. Lastly, papules may be formed by the early stages of new growths of various kinds, either cellular as in lupus, or lymphatic as in lymphangioma, or connective tissue as in fibroma.

Tubercles are very large papules or rather nodules, and vary in character like papules, but are mostly new growths or inflammatory exudations of a special character.

Phymata or Tumors are solid formations of the size of walnuts upwards—*e. g.*, erythema nodosum, fibroma molluscum.

Vesicles are uprisings of the epidermis into minute dome-shape or acuminate bladders, corresponding in size with papules, by either sweat, serosity, or lymph. Vesicles frequently represent only a further stage of the inflammatory exudation process, by the transudation of fluid from the bloodvessels in sufficient quantity to pass through the rete cells, and the separation of its upper and lower layers. They may be simple or compound; thus simple vesicles are due to the collection of sweat between the strata of the cuticle (sudamina), or to the serosity between the cuticle and rete (pemphigus, vesicating erythema), or to the dilat-

tation and varicosity of lymphatic radicles or blood capillaries. The vesicles in all skin diseases are more or less compound, and cannot be emptied by a single pricking, as the fluid does not collect in a single chamber, but is retained in loculi formed by the stretched-out rete cells—*e.g.*, herpes, eczema. Inflammatory vesicles are, as a rule, short-lived, and rapidly rupture or collapse to form delicate scales. They may go on to form pustules.

Bullæ or **Blebs** are simply very large vesicles, and their mode of formation is similar. They bear the same relation to vesicles that tubercles do to papules. They are formed in a variety of affections besides pemphigus—*e.g.*, in erysipelas, occasionally in scabies and erythema multiforme, in herpes iris, in syphilis, and in dysidrosis by the coalescence of vesicles.

Pustules are circumscribed and variously shaped elevations of the surface, due to the formation of pus. The production and collection of pus-cells may be rapid, and the pustules appear as such from the first, or a pustule may be the ultimate stage of a papule or vesicle, as in eczema, scabies, impetigo contagiosa, pemphigus, herpes, etc., and is consequently generally loculated, especially in the variola pock. In acne and sycosis the pus is deep-seated in or about a follicle or gland. Pus formation is very frequent in infantile inflammations and in the scrofulous. Pustules generally have an inflamed areola, and frequently end in ulceration and scarring.

There are also certain secondary changes which must be noticed.

Squamæ or **Scales** are formed of desiccated detached epidermic scales, and they differ from crusts, which are formed mostly by dried discharge. Some desquamation

occurs as a secondary consequence of all inflammatory skin diseases, and forms an exceedingly prominent feature in two diseases—*viz.*, psoriasis and pityriasis rubra. Scales are also formed by the collapsed walls of vesicles. *Crusts* are composed of dried-up discharge—*i. e.*, serum and pus-cells, which have escaped free upon the surface, either from an excoriated surface, as in eczema, or from a ruptured pustule, as in rupia or ecthyma, or from an ulcerating surface. Crusts are also formed by masses of fungus elements (*favus*), and by sebum concreted in masses (*seborrhœa*). Crusts formed by the escape of serum are thin and bright-colored; by dried pus, thick and yellow; from drying of bullæ, as a rule, thin and slightly dark; by drying of sanguous pus from ulcers, thick, dark-colored, and heaped-up; from collected dried sebum, flat, easily detached, and greasy; and in *favus*, they are pulverulent and sulphur-yellow and discoid.

Ulceration is usually the result of purulent inflammation, strumous or syphilitic, and may occur in cachectic individuals as the consequence of eruptions, which, under other conditions, do not ulcerate—*e. g.*, vaccinia, varicella, herpes. It is very frequently met with, and is characteristic of struma and syphilis. Ulceration may also result from new growths replacing normal tissues and themselves necrosing—*e. g.*, in lupus and cancer.

Cicatrices or Scars are the signification that the corium with its ducts, and hairs, and glands, has been destroyed by inflammation, ulceration, and replaced by cicatricial tissue. Scars may also result from the replacing of normal tissue by a new growth, which in its turn disappears—*e. g.*, lupus erythematosus. Scars must not be confounded with the scar-like lines and spots formed either by

an atrophic process or by stretching—*e. g.*, in linear atrophy and the “lines of pregnancy.”

Excoriation is the result of the exposure of the true skin by the scratching or tearing of the cuticle and more or less of the rete. A dark crust from dried blood or serum commonly forms and no scar results.

Rimæ or **Fissures** or **Chaps** are cracks in the skin due to loss of elasticity from inflammatory infiltration, etc., at points where the surface is in constant motion—*e. g.*, chronic eczema and psoriasis of the palms of the hands.

We thus see that the skin is subject to similar pathological changes as other parts of the body, and differences of detail are due to the position of the skin, and the special structure of the skin as regards its lymph and blood supply, its peculiar nervous apparatus, and the presence of the sweat and sebaceous glands and the hairs. The mode of distribution of the blood and nerve supply, and the encasing epithelium, mostly determine the peculiar results of inflammation in the formation of many of the eruptions. The chief pathological changes may be summed up to be (1) *Hyperæmia*, or the excessive determination of blood superficially and ephemerally, and marked by heat and redness. (2) *Anæmia*, which is of little import here. (3) The complex process known as *Inflammation*, either acute or chronic, generally involving the epithelium, and marked by heat, disordered sensation, redness, swellings, and the exudation of more or less serum and corpuscles in varying proportion. (4) *Hypertrophy* of any part or parts of the skin, either in bulk or the number of the preexisting elements. (5) *Atrophy*. (6) *New growths*, or the formation of new tissue, either similar in nature to that where it occurs (*homologous*) or different (*heterologous*). Such growths may be benign or malignant. Various degenerative changes may also occur.

SECTION III.

CLASSIFICATION, OR DIAGNOSTIC CHART OF SKIN DISEASES.

IT is not intended here to discuss the classification of diseases of the skin. A satisfactory classification is a matter for the future, and must needs be unsatisfactory whilst the pathological and causal relations of many affections remain for solution.

However, for the introduction of some order, the following list, or semi-chart, conveys a good general idea of the various eruptions met with in the skin, regarded from a clinical point of view. The list comprises :

1. Eruptions Occurring in Connection with the Acute, Specific, or Zymotic Diseases, including the variolous rash, roseola variolosa, vaccinia, and roseola vaccinia, the rashes of typhus, typhoid, rubeola, rötheln, scarlatina, glanders and farcy, and dengue. These are important in reference to the differential diagnosis of skin diseases.

2. Eruptions, the Local Manifestations of Diathetic States, comprising serofuloderma, or serofulvous inflammation ; syphilodermata, or syphilitic eruptions; leprosy ; framboesia or yaws ; eruptions occurring in connection with *endemic cachexiae*, such as Oriental Sore, the Paranghi disease of Ceylon, etc.

3. Local Inflammations, comprising :

Erythematous inflammation ; the chief feature consists in the presence of hyperæmia, disappearing under pressure, with or without some slight consequent effusion of serosity

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and a few leucocytes. It is a superficial inflammation, mostly of short duration, and the lesions tend to be symmetrical, and spread peripherally within certain limits and form rings. The erythematous diseases are

Erythema multiforme, roseola, urticaria.

Catarrhal, characterized by serous effusion into papillary layer, mostly running on to sero-purulent discharge, and crusting. The effusion tends to concentrate itself about certain points to form vesicles and papules. Under this head ranks

Eczema dermatitis.

Plastic, essentially papular and chronic, due to effusion of plastic lymph and cells into the papillary layer, and sometimes the deeper dermic layer, and some hypertrophy of epithelial cells, including

Lichen, prurigo.

Bullous, the essential feature being the development of bullæ. It includes

Herpes, pemphigus.

Suppurative, characterized by the development of pustules as an essential feature, superficial and painless, or deeply seated and painful. Pus may form secondarily in eczema vesicles, pemphigus bullæ, etc. It comprises

Impetigo contagiosa, ecthyma, furunculus.

Squamous, characterized by hyperæmia of the derma, and hyperplastic growth of cuticle; including

Pityriasis rubra, psoriasis.

4. Hypertrophic and Atrophic Diseases:

A. *Hypertrophic*.

The epithelial layers may be mainly affected, as in

Warts, corns, xeroderma, and ichthyosis.

The connective tissues of the skin may be specially involved, as in

Keloid, fibroma, morphœa, scleroderma.

B. *Atrophic*. Including
Senile atrophy, linear atrophy, general marasmus.

5. **New Formations**, the characteristic being the growth of new tissue made up of granulation cells, or altered and proliferating connective-tissue cells. This group includes

Lupus, cancer, rodent ulcer, xanthelasma.

6. **Hemorrhagic** (cutaneous) effusion of blood, uninfluenced by pressure—in points or patches. Illustrated by Purpura.

7. **Neuroses**, in which the nerves are primarily disordered, and there are no organic changes at the outset. The chief examples are

Hyperæsthesia, anæsthesia, pruritis.

8. **Pigmentary Alterations**, consisting primarily of deposit or alteration of pigment. Pigmentation, *secondary* to other diseases, is not included here.

Melasma, leucoderma, rank here.

9. **Parasitic Diseases**, which comprise :

A. *Animal*.

Scabies, phthiriasis, eruptions due to gnat bites, fleas, etc.

B. *Vegetable*.

Tinea favosa, tinea tonsurans, circinata, and sycosis, tinea versicolor.

10. **Diseases of the Glands and Appendages**, divisible into :

A. *Diseases of the sweat glands and follicles*, as excessive secretion (hyperidrosis); diminished secretion (ani-

- drosis); altered secretion (chromidrosis, osmidrosis); congestive and inflammatory (miliaria, sudamina, lichen tropicus strophulus, dysidrosis, hydroadenitis); and sweat cysts.
- B. *Diseases of the sebaceous glands*, as inflammation with excessive secretion (seborrhœa); diminished secretion (asteatodes); altered secretion with retention (milium, comedo); retention of secretion with hyperplasia of the gland (molluscum); slight retention with inflammation (acne).
 - C. *Diseases of the hair and hair-follicles*, as excessive growth (hairy nævi, moles, hirsuties); diminished growth, constituting partial or absolute baldness (alopecia); textural alteration (fragilitas); inflammation of the follicles (sycosis).
 - D. *Diseases of the nails*, including changes occurring in syphilis, lichen ruber, general eczema, psoriasis, pityriasis rubra, and struma; inflammation of the matrix, as in onychia; parasitic disease termed onychomycosis, caused by the favus parasite or the trichophyton; hypertrophy, atrophy, and corn of the nail.

There are then ten groups of skin diseases—viz., the eruptions of the Acute Specific Diseases; Local Inflammations; Diathetic Diseases; Hyper- and A-trophic Disease; New Formations; Hemorrhagic, Neurotic, and Pigmentary Diseases; Disorders of the Hair and Glands and their Appendages. Such is the clinical classification that may be given at an examination. Every skin disease must fall into one of these groups, and it soon becomes an easy matter to refer any disease before the observer to its proper class.

[PECULIARITIES OF SKIN DISEASES IN THE UNITED STATES.

It is a well-known fact that a malady often undergoes definite modifications under changed external conditions, such as altered climatic and hygienic surroundings. Indeed, the subject of the geographical distribution of disease has ever afforded an attractive field for the medical philosopher; furnishing, as it does, data which, if thoroughly appreciated, may prove to be valuable evidence both as to the etiology and the claims for specific character of certain disorders. The medical profession in the United States have no reason to be ashamed of the labors and results of those of their number who have especially cultivated the subject of skin diseases; for their recorded observations and careful investigations have contributed materially to the progress of modern dermatology and its establishment upon sound scientific principles. From their experience we learn that there are not only some generally recognized variations in type of certain skin affections, but also that there are others, which, though quite frequent in their occurrence in Europe, are rarely met with in America, and *vice versa*.

A general agreement among dermatologists upon the subjects of pathology and nomenclature of skin diseases would alone enable such a rigid contrast to be made as would completely satisfy the demands of science. Such an exact comparison is not practicable at present, although a rapidly increasing consensus of opinion among systematic writers upon these subjects, more particularly observed in the last quarter of a century, warrants the hope that this may be accomplished in the near future.

In the mean time we may, in a general way, formulate the prominent characteristics of skin disorders as they occur

in this country. Prof. James C. White,¹ of Harvard, from a careful study of American statistics and extended personal observation, has arrived at the following conclusions:

I. Certain obscure affections, the etiology of which is little if at all understood, even in those parts of Europe to which they are mostly confined, may be regarded as practically non-existent among us. Such are *prurigo*, *pellagra*, and *lichen exudativus ruber*.

II. Certain diseases, directly connected with and dependent upon poverty and habits of personal uncleanliness, are less prevalent in the United States than in those parts of Europe of which we have sufficient statistical information for a comparison. Examples of this class are the animal parasitic affections especially.

III. Some cutaneous affections of grave character, which are dependent upon or form a part of serious constitutional disorders, are of less frequent occurrence amongst us than in Europe in general, or those parts of it where they are endemic. *Lupus*, the *syphilitodermata* (?), and *leprosy* are the most marked instances of this class.

IV. Certain disorders of the skin, especially those of its glandular systems and those connected more immediately with its nervous system, are apparently more prevalent with us than in Europe. The most notable examples of the former are *seborrhœa*, *acne*, and possibly the heat-rashes; of the latter, *herpes*, *urticaria*, and *pruritus*.

In addition to these valuable observations, it may not be amiss to call the reader's attention to the limitation of leprosy (*elephantiasis græcorum*) within particular districts. Existing in India, China, Egypt, certain parts of Norway and Sweden and the Sandwich Islands, true leprosy is only very rarely encountered in the United States, and almost never in the person of a native. It may be found among

¹ Trans. Int. Med. Congress, 1876, Phila., 1877, p. 681.

immigrants in the Norwegian settlements in the Northwest ; also among the Asiatics in California. It is also seen in Central America and Mexico, but is probably never endemic in this country.

Syphilitic skin diseases are as common in America as in Europe, and when neglected are doubtless equally severe in their manifestations ; but in this country they are less frequently accompanied by such profound degradation of the system under the influence of accompanying filth, poverty, and insanitary surroundings, than they are in foreign countries. *Lupus vulgaris*, according to Dr. Duhring, is much milder here than in Europe ; and cases of *lupus erythematosus* are relatively much more common in America.

At the last meeting of the American Dermatological Association¹ the following CLASSIFICATION AND NOMENCLATURE was adopted :

CLASSIFICATION AND NOMENCLATURE OF DISEASES OF THE SKIN.

ADOPTED BY THE AMERICAN DERMATOLOGICAL ASSOCIATION.

CLASS I.—DISORDERS OF THE GLANDS.

1. *Of the Sweat Glands.*

Hyperidrosis.	Bromidrosis.
Miliaria crystallina.	Chromidrosis.
Anidrosis.	

2. *Of the Sebaceous Glands.*

Seborrhœa.	Cysts.
(a) oleosa.	(a) milium.
(b) sicca.	(b) wen.
Comedo.	Molluscum sebaceum.
	Diminished secretion.

¹ Held at Saratoga, August, 1878.

CLASS II.—INFLAMMATIONS.

Exanthemata.	Pityriasis rubra.
Erythema simplex.	Lichen.
Erythema multiforme.	(a) planus. (b) ruber.
(a) papulatum.	
(b) bullosum.	
(c) nodosum.	
Urticaria.	Eczema.
Furuncle.	(a) erythematosum. (b) papulosum.
Anthrax.	(c) vesiculosum. (d) madidans.
Phlegmona diffusa.	(e) pustulosum.
Pustula maligna.	(f) rubrum.
Herpes.	(g) squamosum.
(a) facialis.	Prurigo.
(b) progenitalis.	Acne.
Herpes zoster.	Impetigo.
Psoriasis.	Impetigo contagiosa.
Dermatitis. ¹	Impetigo herpetiformis.
(a) traumatica.	Erysipelas.
(b) venenata.	Ecthyma.
(c) calorica.	Pemphigus.

CLASS III.—HEMORRHAGES.

Purpura.	
(a) simplex.	(b) haemorrhagica.

CLASS IV.—HYPERSTROPHIES.

1. *Of Pigment.*

Lentigo.	Chloasma.
	(a) locale.
	(b) universale.

¹ These indicating affections not properly included under other titles of this class.

2. *Of Epidermal and Papillary Layers.*

Keratosis.	Cornu cutaneum.
(a) pilaris.	Verruca necrogenica.
(b) senilis.	Xerosis.
Callositas.	Ichthyosis.
Verruca.	Ichthyosis of nail.
Clavus.	Hirsuties.

3. *Of Connective Tissue.*

Scleroderma.	Rosacea.
Sclerema neonatorum.	(a) erythematosa.
Morphœa.	(b) hypertrophica.
Elephantiasis Arabum.	Framboesia.

CLASS V.—ATROPHIES.

1. *Of Pigment.*

Leucoderma.	Vitiligo.
Albinismus.	Canities.

2. *Of Hair.*

Alopecia.	Alopecia furfuracea.
Alopecia areata.	Atrophia pilorum propria.

3. *Of Nail.*4. *Of Cutis.*

Atrophia senilis.	Atrophia maculosa et striata.
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CLASS VI.—NEW GROWTHS.

1. *Of Connective Tissue.*

Keloid.	Neuroma.
Cicatrix.	Xanthoma.
Fibroma.	

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2. Of Vessels.

Angioma.	Angioma cavernosum.
Angioma pigmentosum et atrophicum.	Lymphangioma.

3. Of Granulation Tissue.

Rhino-scleroma.	Syphiloderma.
Lupus erythematosus.	(a) erythematosum.
Lupus vulgaris.	(b) papulosum.
Lepra.	(c) pustulosum.
(a) tuberosa.	(d) tuberculosum.
(b) maculosa.	(e) gummatosum.
(c) anaesthetica.	Carcinoma.
Serofuloderma.	

CLASS VII.—ULCERS.

CLASS VIII.—NEUROSES.

Hyperesthesia.	Anesthesia.
(a) pruritus.	
(b) dermatalgia.	

CLASS IX.—PARASITIC AFFECTIONS.

1. Vegetable.

Tinea favosa.	(b) tonsurans.
Tinea tricophytina.	(c) sycosis.
(a) circinata.	Tinea versicolor.

2. Animal.

Scabies.	Pediculosis corporis.
Pediculosis capitis.	Pediculosis pubis.—ED.]

SECTION IV.

THE CAUSES OF SKIN DISEASES.

IN the previous Section a general summary has been given of the different varieties of skin diseases, in the form of a tabular classification.

In this Section a sketch of the causes of these diseases will be given. Such causes as are not due to *congenital* aberrations of nutrition or improper development may be conveniently ranged under three heads:

- A. *Those which act from within the system upon the skin; or INTERNAL causes.*
- B. *An innate disposition in the skin tissues themselves to take on a diseased action.*
- C. *Those which act from without the system upon the skin; or EXTERNAL causes.*

Opinions differ greatly as to the relative frequency of the operation of these several factors in the causation of skin diseases. Many of the causes in groups A and B are *hereditary*. *Age* and *Sex* have also an important bearing with respect to the structure of the skin, and its proneness to take on diseased action and the development of certain special functions.

A. **Internal Causes.**—Amongst these the most important are:

a. *Alteration of the normal healthy character of the blood* by special poisons, inducing specific eruptions, as in the acute exanthemata, in pyæmia and septicaemia, in syphilis, and probably leprosy; by the presence of certain medicinal substances, *e. g.*, potassium iodide and bromide, copaiba, arsenic, belladonna, etc., which irritate various tissues

under certain conditions; by the accumulation of morbid products, which excite eruptions or impart an inflammatory character to them, or render tissues prone to inflammation, as in gout and rheumatism; by the imperfect fulfilment by organs of their natural functions, as menstruation, digestion and assimilation, perspiration, sebum formation, and hepatic, intestinal, and renal excretion, whereby harmful substances enter the blood current or are retained in it in undue proportion; by indulgence in special articles of food, either in excess or of a deleterious character (shell fish, bad fish); and by impoverishment by depraved habits, overwork, excessive demand for pabulum, climatic influence, etc.

b. Nerve disturbance, which acts in several ways, first, by inducing changes in the calibre of the vessels by which the blood supply and fluid transudation are affected, as in hyperæmia and urticaria; secondly, by directly encouraging morbid tissue changes as in herpes and pemphigus, and dystrophic affections; and, thirdly, by the loss of control over the skin nutrition, which often follows from impaired functional power, allowing morbid action of all kinds to take place more readily. The nerves may be influenced directly as in herpes and anaesthetic leprosy, or reflexly from some disordered organ—*e. g.*, the stomach or uterus, as in urticaria.

B. An Innate Disposition in the Skin Tissues Themselves to take on a Diseased Condition.— This is a point on which special stress is laid. It is pretty certain that many diseases of the skin must originate in a disordered behavior of the tissues themselves, and do not necessarily depend for their cause upon any general defect of nutrition. For instance, cancer is a case in point; and so also warty growths of all kinds, fibroma, keloid, and perhaps lupus, are other illustrations of the same thing. In some cases there is just an excess of growth, a *plus* state of

the nutrition of the tissue and nothing more; or it may be a *minus* condition. In other instances it is a perverted nutrition, a deviation in the type of the tissue, as in cutaneous cancer. In fact, Group 4, and many of the diseases in Group 10 of the classification illustrate this point. It is asserted by most writers that such changes—hypertrophy and atrophy—are, in reality, merely the consequence of the presence in the blood of a greater or less amount of the pabula of the particular tissues affected. But if these pabula be in excess, which is unproved, the hypertrophy would not occur unless the tissues were disposed to make use of them fully, and if such a disposition existed in a degree less than that of healthy nutrition, atrophy would result. So that, after all, the "formative capacity" of the tissues themselves is an important element in these *plus* and *minus* states of growth; and the explanation given above may be true, for if the tissues themselves exhibit a tendency to hyperplasia, Nature will answer the *demand* for an increased supply of pabulum. In the case of perverted nutrition (heterologous formation) the changes are explained more readily by a perversion of the "formative capacity" than by altered character of growth the consequence of a supply of a modified kind of pabulum.

C. External Causes.—Some of these influence the general health for evil, and so disorder the skin indirectly; others act directly upon the skin.

1. Amongst the external causes acting *directly* upon the skin, the most important are: *Scratching*, which may excite and always aggravates disease, and may, in contagious cases, spread it from place to place, as in scabies and contagious impetigo. *Local irritants* of all kinds—*e. g.*, cold, heat, friction, pressure, flannel worn next the skin, irritants, plasters, fluids, and applications of all kinds; irritating substances, such as lime, sugar, flour, washing soda, producing brick-

layers', bakers', grocers', and washerwomen's itch; unwholesome handicrafts; dyes, contusions, animal and vegetable parasites of all kinds; medicinal applications and *want of care of the skin* in the dirty and ill-fed; many of these causes only set up inflammation when the system is specially predisposed by disordered health. The influence of *occupation* is well illustrated by the occurrence of callosities in certain regions.

2. Here may be mentioned also the causation of such local diseases as Elephantiasis Arabum, and Guinea-worm disease, by the introduction of parasites into the system through the stomach.

3. Amongst the external causes that act *indirectly* upon the skin, through their influence upon the general health, may be mentioned: Want of cleanliness, climatic influences, defective clothing, neglect, and the like; animal poisons inoculated into the skin, etc.

Clinically, it is of the highest moment to be acquainted with the fact that, as a rule, these several causes not only vary in character, but do not operate in a solitary or individual way. To put it in another way: (1) these influences or agencies are, in reality, divisible into *predisposing, exciting, producing, and intensifying* causes; and, further, (2) the true cause of the state of any given disease is made up of a number of phenomena or agencies in combined operation. These are points of great practical importance in reference to the treatment of skin diseases.

In reference to the first point, it may be said that many so-called local causes only predispose to, though they usually excite, eruption. For instance, debilitating occupations render a man much more liable to be affected by the handling of irritants; in a bad climate, the system generally is disordered in addition to the skin, and the latter is so rendered more liable to become diseased. Other causes act as pure excitants, as when there is a predisposi-

tion to a disease—*e. g.*, eczema, and the local irritant excites it, but probably would not if acting without the existing predisposition. Some influences, however, are really producers of disease, as in the case of medical irritants or special poisons—*e. g.*, malignant pustule. Other agencies again only aggravate existing disease, as in the case of the wearing of flannel, or exposure, or scratching.

In reference to the second point, it is indisputable that, in most cases, several agencies or influences, external or internal in origin or operation, combine to make up the true cause of a disease, and it is the duty of the physician to recognize this fact and analyze very carefully the composite cause of skin troubles. In fact, in such correct analysis lies the source of all successful dermatological treatment. From a therapeutical point of view, diseases of the skin are very different things as portrayed on paper and as seen in the consulting-room. A disease may answer most perfectly to the typical description, but the remedies ordered for its cure may signally fail, because the analysis of its causation is incorrect or incomplete. For diseases are greatly modified as they occur in different subjects, and it is not the uncomplicated type that is to be dealt with in practice, but the disease modified and influenced by the many concomitant conditions of age, constitution, occupation, etc.

It may be useful to mention a few common combinations met with clinically, which illustrate the multiform character of the causation of skin diseases, as seen in the consulting-room. In the case of eruptions provoked by local irritants, referred to above, there is very frequently debility present which favors the development of the disease, and which must be got rid of if the eruption is to get well, and if it is to be cured in the best way. In fact, the skin of a healthy person will mostly resist the action of many of the local irritants specified, but the skin cannot do so if the

subject be weak and debilitated ; so that it is an important point to give tonics as the rule in cases of eruptions excited by local irritants. This simple combination of causes, debility and local irritants, is often found inducing simple or eczematous inflammation, etc. Other examples readily occur, such as eczema in a gouty subject, modified by neglect and scratching ; psoriasis in a strumous subject, in whom the tendency to the disease is hereditary ; erythema in a rheumatic subject, in connection with dyspepsia ; eczema occurring in cooks exposed to the irritating influence of the fire, whilst the patient also has a blood current charged with retained excreta, in consequence of inefficient bowel and kidney action ; lupus in a scrofulous subject ; tinea tonsurans in a boy with persistent anaemia and a phthisical tendency ; pruritus in connection with senile atrophy of the skin, liver derangement, gout, or it may be in connection with diabetes. Such examples might be multiplied almost indefinitely.

In estimating, therefore, the cause of any given cutaneous disease, attention must not only be paid to predisposing and exciting causes, but to coincident occurrences and accidental concomitants which modify such disorder ; for it is not in the abstract that the disease is to be regarded, but in its entirety and in all its clinical features and behaviors. The correct estimation of a disease after this fashion constitutes the true diagnosis, upon which a few remarks will be made in the next Section.

SECTION V.

DIAGNOSIS.

First.—In making a diagnosis, the observer should apply the rule laid down (Section I.) for examining skin diseases—that is to say, he should examine the whole of the eruption, and not a part only, and also trace carefully its history, to discover the nature of its beginning, the character of the primary lesion and its stages, if any, and their transitional relationship, and the general course of the eruption up to the time of observation.

Secondly.—He should note the *age* of the patient, for certain diseases, such as tinea tonsurans, are almost peculiar to childhood; and others, such as tinea versicolor and carcinoma, only occur in the adult; the *sex*, because syphilis, for example, only occurs in the male; the *color*, which is characteristic in lichen ruber, tinea versicolor, and syphilis; the *sites* of the eruption, the *extent of distribution*, and the *degree of symmetry*; the *grouping of the lesions*, whether aggregated, disseminated, in lines or bands, in segments or circles, and their *mode of spreading*; and, lastly, whether any special subjective sensations are present, such as itching, tingling, pain, formication, hyperesthesia, or anaesthesia. The possible effect of the seasons—*e. g.*, in prickly heat, and the recent sojourn of a patient in the tropics, demand attention.

Thirdly.—The observer must apply all the facts he has collected, and proceed to determine to which class the disease belongs, according to the principles laid down in the chart in Section III. It is well in doing so, not only

to try and recognize the particular disease by its own definite and special characteristics, but also by the exclusion of other affections with which it is likely to be confounded. Is it an eruption of the acute specific diseases? Then the constitutional condition will be by far the most pronounced, the patient more or less prostrated, the temperature unusually high, whilst the other pyrexial symptoms will be marked, and out of proportion to the mere rash; the access of the malady will have been *comparatively* sudden, and so on. Is the eruption essentially erythematous? It must be one of four conditions—viz., erythema, intertrigo, roseola, urticaria; and the reader is referred for the features of these to the special description in Part II. Is the disorder accompanied by sero-purulent discharge, by the development of bullæ, by pustules, by vesicles, or by squamæ alone? Then the disease is one of those comprised under local inflammations. Is the eruption part of a cachexia, or some special diathetic condition present? Then it belongs to Group 2. And in a similar way may hypertrophies or outgrowths of tissue, atrophies, new formations, hemorrhagic spots, neurotic conditions without organic changes, pigmentary alterations, parasitic diseases, and affections of the glands, hair, and nails, be put under their respective headings. In the case of new formations, the diagnosis is singularly easy. The youngest student can readily distinguish the newly formed fleshy mass of a neoplasm in the skin from the ordinary rapidly formed semi-hyperæmic inflammatory deposit of a similar size; and he knows practically that he has a case of syphiloderma or lupus to deal with. Further, in making a diagnosis, the observer must remember to determine whether the disease is or is not complicated by another, as evidenced by an admixture of different characters, and to thoroughly sift out the nature of any constitutional modifying influences.

Fourthly.—An estimate of the *immediate or exciting* cause of any given eruption is of the first importance in a complete diagnosis. No doubt, when the observer has been able to put the disease before him into its proper class, a pretty correct indication is obtained of its causes, especially as regards Classes 1, 2, 4, 5, 6, 9 (Section III.); yet, unfortunately, the difficulty is greater with the eruptions of the commonest occurrence, comprised in Class 3, and with those in Classes 7 and 10 (B and C). Hence the observer must proceed on the lines laid down in Section IV., working out the specific cause, and inquiring into the production of the eruption from within or without. Is the cause a hereditary tendency, the result of blood-poisoning, nerve disturbance, a disposition in the tissues themselves to take on a diseased condition, or climatic influence? Is the cause to be sought in local agencies, as detailed under C (Section IV.)? And at the same time the observer will bear in mind what has been said about the multiple character of the causes of skin diseases. So the diagnosis will be correctly worked out. The way is now prepared for some remarks on therapeutics in the following Section.

SECTION VI.

TREATMENT (GENERAL PRINCIPLES).

As there is nothing essentially special in the pathological changes that occur in diseases of the skin, it follows that there is little that is absolutely special in the principles of treatment. The minor differences that exist arise from the variations of structural detail in the skin—*e. g.*, hair, sweat, and sebaceous glands, nails, and the copious supply of nervous, blood, and lymphatic apparatus, and from the fact

that the skin is an external structure, and so amenable in a very large degree to local treatment.

A correct appreciation of the nature of the morbid process and its cause must precede successful rational treatment. When, in accordance with the rules laid down, a given disease has been placed in its proper clinical class, and the exciting and other causes discovered, the proper kind of treatment naturally suggests itself. It may be said, indeed, that the ten groups of skin diseases require three main methods of treatment—viz., a purely local one, or one almost wholly general, or a mixed one, partly local and partly general. A limited number of skin diseases have a purely external origin, such as a corn, callosity, intertrigo in infants, and the inflammations excited by some species of rhus plant, the common stinging nettle, croton oil, etc., and these require external remedies only. The congenital abnormalities of structure, such as ichthyosis, and blood vascular nævi, and moles, may be mentioned as not amenable to internal treatment. There are also some affections caused by external agents which are only excited, or only progress, when the tissues are below the standard of health, such as bricklayers', bakers', or washer-women's eczema, and some parasitic diseases, and the necessary external treatment requires helping, by suitable internal remedies. Here may be mentioned the group of diseases having their origin in an innate morbid disposition of the tissues, such as rodent ulcer, fibroma, keloid, and perhaps lupus, psoriasis, and prurigo, and they are mostly unaffected by internal measures, with the notable exception of psoriasis, and the latter disease illustrates the fact that various stimuli, such as gout, scrofula, climatic influences, etc., may excite this morbid predisposition. The main treatment of a number of affections consists, with our present knowledge, in a tonic or building-up course of remedies to rectify widespread lowered nutrition, and espe-

cially with reference to impaired influence of the trophic nerves—*e. g.*, in such obscure diseases as scleroderma, morphaea, lichen planus and ruber, pityriasis rubra, and leucoderma. This brings us to the consideration of such diseases as purpura, syphilis, scrofuloderma, gouty eczema, chronic urticaria, and some forms of pemphigus, where internal treatment is decidedly the effectual method, though external applications may be more or less valuable adjuncts. Finally, such diseases as herpes zoster, roseola, erythema multiforme, facial erysipelas, and true impetigo contagiosa, tend for the most part, like varicella, to run a definite course, and their exciting causes are of temporary character, so that these affections get well of their own accord, and only require watching to prevent unfavorable intercurrences, and the application of external remedies to allay pain and irritation, to protect the surface, and dry up discharge, etc. The majority of diseases, however, run an indefinite course, and are to be attacked by therapeutic measures based upon a consideration of the varying combination of exciting, aggravating, or modifying agencies. (*See Etiology.*) The treatment, therefore, consists in a careful combination of both local and internal remedies.

Local remedies are of great importance in skin affections, and enable us to subdue inflammation, to relieve pain, itching, and subjective sensations, to heal the surface, to prevent the skin drying up and becoming harsh and uncomfortable when the sweat and sebum are not properly secreted, to obviate the pain, etc., when the protective epithelium is absent, to destroy the harmful character of pus and discharges, to astringe the bloodvessels, and dry up and stop serous effusion, to protect inflamed surfaces from external harmful influences, such as air, water, scratching, and so on, to stimulate diseased parts to healthier action, to resolve effusion and infiltration, and to destroy and remove new growths. For these purposes, dusting powders, lotions,

liniment applications, ointments, pigments, pastes, baths, poultices and fomentations, and cauteries are in use. (*See the Cutaneous Pharmacopœia.*) In addition, electricity is now called into requisition for remedial purposes. With the majority of practitioners, the choice of a remedy is mere empiricism. To insure success it is necessary to understand what one wants to bring about, and also to have a knowledge of the action of the different agents, and then make the proper selection.

Lotions require frequent renewal, unless they are purposely used for drying up an exuding surface. It cannot be too forcibly laid down that an abraded infiltrated skin must not be allowed to dry up and crack. The addition of oil or glycerine sometimes obviates this.

Ointments are extremely useful, as they protect inflamed surfaces, exclude the air, and lubricate the parts, and form an adherent application for the conveyance of various substances to the skin; but they must be carefully prepared free from all grittiness and tendency to rancidity.¹ Where the skin is much inflamed, ointments should not, as a rule, be smeared or rubbed on, but be first applied to fine linen rag or some soft, unirritating substance. When the effusion is free, *absorbent antiseptic powders* help to dry up the surface and disinfect the discharges. If the inflamed surface be very extensive, *baths* are of special service for cleanliness and comfort. Hard or sea-water should be avoided.

A word may be said here as to the danger of "driving in" eruptions. In the present state of our knowledge of the pathology of disease no fear need be entertained of the too rapid alleviation of diseases of the skin.

¹ The numerous hydrocarbons—*e. g.*, vaseline, cresoleum, unguis petrolei, duroleum, saxoleum, cosmoline, etc.—now in use as the bases of ointments, instead of lard, mark a great improvement in the preparation of soothing salves. Collodion, gelatine, etc., may be used in some cases.

As regards *local* remedies, there are some important rules to be observed, viz. :

(1) Whenever active hyperæmia is present, or a part is at all actively inflamed, be the disease what it may, applications of a stimulating nature should not be used, but the treatment should be essentially *soothing*, otherwise the inflammatory symptoms will be increased, and the disease aggravated and probably spread.

(2) Not until the stage of active hyperæmia has fairly passed should *stimulating applications* or *revulsives* be employed. These are to be reserved for the stages of vascular sluggishness and inflammatory induration and thickening.

(3) The action upon the skin of all external irritants—such as scratching—should be prevented, and the air excluded from excoriated surfaces, especially by oil-packing or the application of a salve.

(4) All crusts must be carefully removed by bathing, poulticing, or oil-packing, before other applications are applied.

(5) It is necessary to remember that many drugs, such as mercury, carbolic acid, iodine, tar, pyrogallic and chrysophanic acids, may be absorbed, and therefore they must not be applied for too long a time or over very extensive surfaces without careful observation of the urine and general effects.

As regards *internal or general remedies*, it is proposed to indicate below, in as practical and concise a form as possible the conditions which should be taken into consideration in framing the treatment of such diseases as erythema, intertrigo, urticaria, eczema, lichen, prurigo, pemphigus, ecthyma, furunculus, pityriasis rubra, and psoriasis; and inflammatory conditions of the glands and hair-follicles, such as acne, dysidrosis, and sycosis, which are analogous in pathological nature to, and only differ in regard to their anatomical seat from, those preceding. The following short

sketch or chart, inasmuch as it applies to the great majority and most common forms of skin diseases, should be used regularly in determining the treatment, which must necessarily vary with the different combinations of influencing agencies referred to. These conditions are:

Constipation.—This causes dyspepsia, liver torpor, retention of excreta, vascular fulness and anal congestion, and so leads to an impure blood current and debility. It occurs in all forms of skin diseases.

Debility, including anaemia.—This retards recovery from want of recuperative power in the system; but frequently important emunctory and assimilative organs perform their functions languidly or imperfectly as a consequence of the debility. It is especially operative in furunculus, eczema, psoriasis, lichen, pityriasis rubra, pemphigus, and ecthyma.

Dyspepsia.—This induces debility. It also leads to liver disturbance, and impurifies the blood; and it increases hyperæmia by reflex action, as in acne. It is common in connection with eczema, urticaria, acne, and sycosis.

Errors of Diet.—These introduce special irritative substances into blood, cause dyspepsia, lead to accumulation of nitrogenous matters in the system, to liver disorder, etc., and are operative in all forms of inflammatory eruptions without exception.

Gouty and Rheumatic Diatheses.—These cause accumulation of uric and lactic acids and allied compounds in blood, which give an inflammatory character to disease. They influence especially eczema, psoriasis, lichen, ecthyma, sycosis, and urticaria.

Diabetes.—This increases inflammatory conditions, favors the occurrence of phlegmonous inflammation, leads to freer development of disease, and tends to chronicity of eruption. Its influence is often seen in eczema, psoriasis, intertrigo in adults, furunculus, and anthrax.

Lack of Hygiene.—This disposes to torpor of skin, and the accumulation of epithelial débris and secretion in the follicles. It favors the occurrence of morbid action and disease, and greatly influences acne, sycosis, eczema, and intertrigo.

Repression of special normal functions (eliminatory and otherwise). This throws the necessity of compensatory elimination on the skin, which may fail to respond, and so become diseased. In dependent parts it leads to increase of fluid in tissues. It occurs in furunculus, ecthyma, acne rosacea, and eczema.

Retention of Excreta from kidney, liver, and bowel inactivity. This, by leading to the accumulation of effete products or *materies morbi* in the blood, gives the latter an irritative quality, which aggravates hyperæmia in all inflammatory skin diseases. It is a common cause of pruritus of the skin. It also leads, as in the case of kidney inaction, to increase of watery fluid in tissues—*e. g.*, in eczema of the legs.

Strumous Diathesis.—This imparts an unusually purulent character to effusions, and favors the implication of the glands and connective tissues. It operates powerfully and frequently in cases of eczema, psoriasis, acne, and sycosis. The evidences of struma in advanced life must be carefully distinguished from those of gout, and the great tendency to pus production in children must not be confounded with the strumous diathesis.



PART II.

THE DESCRIPTION AND TREATMENT OF SKIN DISEASES, ALPHABETICALLY ARRANGED.

Acarus folliculorum is the name of a mite which exists probably as a harmless resident in the sebaceous follicles of almost all persons, except new-born children. They measure 0.085" to 0.0125" in length by 0.020" in breadth, and lie with their heads directed inwards, and one to four are usually found in a follicle, and in various stages of development.

Acne is an inflammation of the sebaceous glands and ducts, and of the corium immediately around, and it is preceded invariably probably by the retention of altered sebum in the form of plugs called *comedones*. (See Comedo.) The disease is seen chiefly on the face and shoulders and chest, but may occur on any region where sebaceous glands exist. The varieties, or stages, which it is useful to remember, are first, *Acne papulosa*, where the active hyperæmia present around each follicle has projected it into a reddened papule the size of a millet-seed (*Acne simplex*), in the centre of which the black-topped comedo sometimes shows prominently (*Acne punctata*) ; secondly, *Acne pustulosa*, where, in the process of maturation of the inflammation, a cap of pus forms at the summit of the papulæ ; and thirdly, *Acne indurata*, where, in addition to the above lesions, we find large livid "boutons" or nodules, formed by indolent deep-seated inflammation, which may, however,

go on to suppuration. The name *Acne vulgaris* is very commonly in use also to denote the very frequently seen concurrence and admixture of papules and pustules in all stages. Some authorities hold that acne is a purely local disease following upon the formation of comedo, and due to a sluggish, torpid, thick skin; for the most part, however, there are more factors than this in its causation, and the occurrence of the eruption about puberty chiefly points, not to any special influence of the sexual development, but to the general physiological activity of the hair-sacs and their appendages at this time, and their predisposition to inflammation. Certain it is also that the predisposition is often increased at this time by the general debility present, whilst the inflammation is lighted up by any gastro-intestinal derangement, such as constipation, dyspepsia, and menstrual troubles. Acne is very common after variola.

Bazin and Hebra described also a very peculiar and rare form of acne (*A. varioliformis*) affecting the forehead and adjoining portion of the scalp chiefly, in which papulo-pustules without comedones form, covered with a very adherent flat crust, and leave very depressed scars. Some think this must be a syphilide. (See Relapsing Acneiform Syphilides.) Hebra further described in cachectic, serofulvous, and scorbutic persons the occurrence of a general acne eruption, without comedo (*A. cachecticum*), which must be distinguished from a miliary pustular syphilide and variola.

There is yet another rare affection, occurring chiefly about the poll, and described under the names **Acne Keloidienne** or **Dermatitis papillaris capillitii**. It seems to begin in an inflammatory process about the hairs, perhaps in the sebaceous glands, and steadily progresses from the formation of one or more discrete or confluent papules, to extensive keloid-like masses, through which, here and there, bundles of twisted hairs project.

Acneiform eruptions, involving the sebaceous glands, may be excited also by various external irritants, such as tar, flax, etc., and also by some internal excitants of the glands, such as the bromide and iodide of potassium. True acne must be very carefully distinguished from the acneiform, and often scarring and ulcerating, syphilide, and there is some danger of confounding some slight cases of varioloid.

TREATMENT.—The objects in view are to get rid of any dyspepsia present, and to relieve any constipation by adjusting the diet, correcting bad habits, and administering stomachics, sedatives, alkaline and bitter remedies, and suitable laxatives. This done, the general strength must be built up, and chloro-anæmia corrected by ferruginous tonics, by quinine, mineral acids, cod-liver oil, and so on. The latter is especially useful in strumous subjects. Moderate exercise and fresh air are essential, and arsenic is sometimes useful in small doses as a tonic. Locally, the face in all stages may be thoroughly bathed or steamed each night, in the mild forms, for the cleansing and stimulating effects, and in the inflammatory stages for the soothing influence. Where comedones exist, they should be expressed if possible. If there be active inflammation present, soothing applications must be resorted to, such as F. 83, 22, 66 (lotions), 20, 86, 84, 85 (ointments), or 90, but, as a rule, stimulant applications are required to promote a healthier disposition in the thick, muddy, torpid skin. For this purpose, brisk friction with a towel after bathing, the use of soaps of properly selected strengths, from toilet soaps to medicated or even soft soap, and the application of stimulant applications, especially of sulphur, are all of the greatest service in different cases. Useful applications are seen in F. 44, F. 69, 70, 71, 72, 24, 68, 56, 58. Active treatment should be carried out at night, and then, if the face shows signs of over-irritation, soothing

measures may be applied during the day. The strength of the application must depend on the character of the skin and amount and nature of the eruption present. Occasionally it is advisable to let out the pus from pustules, and to touch some indurated papules with carbolic acid.

Acne rosacea or **Rosacea** is a chronic composite affection of the face, and particularly of the nose, which is generally years in formation, and which is now considered a disease distinct from acne. It begins as a frequently recurrent hyperæmia of the face, which gradually gets persistent with exacerbations, and over this hyperæmic area papules form in the papillary layer of the skin, and likewise as a complication acne papules and pustules about the glands. The persistent hyperæmia causes induration of the skin, the glands and bloodvessels hypertrophy, and dilated venules course over the surface. The nose especially reaches gradually an enormous size, with several lobes (*Rhinophyma* or *Acne hypertrophica*). This recurrent hyperæmia is largely dependent on chronic dyspepsia, generally of an irritative nature, such as is seen for instance in hard drinkers ("grog-blossoms"), but it is also associated with the plethoric states of middle life and with the climacteric period in women.

TREATMENT.—The habits must be regulated, the dyspepsia corrected, the plethora relieved, and all such exciting conditions removed, whilst locally it is proper to soothe any existent active inflammation, and to briskly stimulate at other times (as explained under *Acne*) to remove chronic infiltration. Strong astringents are sometimes useful in controlling the vascular dilatation and infiltration of the tissues (Krameria ointment, F. 79, and collodion). The hypertrophied and dilated vessels must be destroyed by scarification, the lancet, electrolysis, or faradization.

Alopecia or Baldness includes all forms of deficiency in the quantity of the hair, whether congenital (a very rare condition) or acquired, local or general. It is evident that *acquired alopecia* may result either from an excessive falling out of hairs, or from a diminished formation of new ones, and commencing as mere thinning, it may go on to complete baldness. There are two varieties of alopecia which it is necessary to distinguish from one another, viz., first, *Alopecia senilis*, or the baldness of old age; and, secondly, a number of cases of premature thinning and baldness grouped together as *Alopecia prematura*. *Alopecia senilis* usually commences at the junction of the scalp with the forehead, and extends gradually backwards to the vertex, and laterally to the middle of the parietal region; but the loss of hair may proceed most rapidly over the vertex. The hairs turn gray and drop out, leaving a thinned, smooth, shining, bald pate. The conditions disclosed by microscopical examination are variable, but in old cases the skin structures and glands are generally atrophied. Men are affected much more than women, and the change is incurable. The age at which this kind of baldness sets in varies much according to the hereditary predisposition, the constitution, etc. *Alopecia prematura*, or *premature baldness*, signifies that there is excessive falling out, or diminished production, occurring independently of the natural course of events just described, and it must be due to some departure from the standard of health, either of a general or local nature. Thus it may be brought about from a general lowering of the vital tone, and consequent ill-nourishment of existent hairs, and the improper formation of new ones—*e. g.*, after exhausting diseases, such as fevers, the syphilitic and other cachexiae, after the puerperal state, during chloro-anæmic states, from fast living, from sedentary habits, and so on. Or it may be a direct consequence of local structural disease, such as morphœa, or

lupus, or of inflammatory affections such as eczema and psoriasis, and more particularly of slight forms of seborrhœa (*A. furfuracea*). Lastly, it may be due to a common and peculiar form of atrophy of the skin, known as Alopecia areata, which we must discuss more in detail. *Alopecia areata vel circumscripta* is a very common disease, seen more frequently in children than adults, and females than males. The subjects of it usually have dark hair and pallid complexions, and are mostly ill-nourished and lean. The most common site is the scalp, especially about the occiput, but other hairy parts may be involved, such as the eyebrows, eyelashes, beard, whiskers, moustache, axillæ, pubes, and indeed the whole surface. It usually commences by the more or less sudden formation of one or several white, smooth, glossy, ivory-like, sharply defined patches, either completely bald or studded, especially about the margins, with a few club-shaped, broken-off stumps. The patches may extend rapidly or slowly at their periphery and coalesce with others that spring up to form extensive bald areas. There is also sometimes seen an acute general falling out in which the circular areas are not well marked. An examination of the parts proves the existence both of atrophy of the skin, and of the hairs and hair-forming parts. The loosened hairs are found to have their bulbs characteristically wasted or very ill-formed, whilst the shaft is atrophied with the exception of a node, which has been proved to be formed originally at a point just above the bulb at the very outset of the disease, and it is at this node that the hair breaks when it is pushed out of the follicle. Consequently the hairs are slender at their exit from the follicles, and terminate in a club. Ringworm hairs, on the contrary, are opaque and swollen as they issue from the follicles. In France it has been held that the disease is caused by a fungus (*Microsporon Audouinii*) far more minute than the trichophyton, and liable to be mistaken for fat gran-

ules, but the view is gradually giving way, as observers are not agreed as to the character, site, or even constant presence of the parasite. There are, on the other hand, many reasons to be adduced for the widespread belief that the disease is a tropho-neurosis. Ringworm is the only affection, with the exception of perhaps *morpheœa* of the frontal region, and scars, with which it could possibly be confounded, but it should be remembered that in rare cases the two diseases may coexist, and that *A. areata* may be seen in more than one member of the same family. The ringworm fungus excites more or less inflammation, and consequently desquamation, seborrhœa, and discoloration, in contrast to the smooth wasted patches of alopecia.

TREATMENT.—The local or general causes of the baldness should be carefully made out, and any seborrhœa, eczema, etc., treated by the usual methods. (See those diseases.) When the surface is sound the growth of the hair may be stimulated by the use of such lotions as F. 94, 95, 96. The localized atrophied patches of Alopecia areata require still stronger application frequently repeated, such as iodine liniment, and 97, 98, 99, 100, 101. Blistering at intervals with liquor epispasticus is very useful. The strength and character of the application must be adjusted to the sensitiveness and extent of the diseased area. The health must be built up by cod-liver oil, ferruginous tonics, quinine, arsenic, and sea air if possible.

Anæsthesia may be the result of the direct injury of a nerve, or it may supervene on various morbid processes involving the cutaneous nerves, such as in syphilis and leprosy, *morpheœa* and alopecia, and where a tumor compresses a nerve. It may also be a consequence of lead-poisoning, and frequently follows upon functional or organic brain or cord disease, and occurs upon the same side as the paralysis, or on the opposite side, or is bilateral.

Angioma (*αγγεῖον*, a vessel.) (See Nævus.)

Angioma pigmentosum et atrophicum (xeroderma of Hebra) is a very rare affection of the skin of the face, neck, hands, forearms, and exceptionally of the legs, beginning in early childhood and running its course mostly under puberty. The affection consists in the development of an immense number of little new capillary formations of irregular outline, and mostly very small. These presently atrophy, and their site becomes occupied by brown or black macules or freckles, and these are succeeded in their turn by scar-like atrophy points and spots, which, by their great number and aggregation, cause very much disfigurement. The affection progresses with very different degrees of intensity, and all the stages are seen in active cases coexisting. A fourth lesion is sometimes seen, viz., little inflammatory growths or tumors made up of an increased number of vessels, and these, now and then, apparently give rise to epithelioma. The disease has only been met with in Germany and America until quite recently.

Anidrosis signifies the diminished formation or absence of sweat, and it may be due to a congenital defect or to subsequent structural alterations in the skin or glands themselves, in such affections as morphœa and ichthyosis. Sudden temporary suppression of the sweat secretion may also occur from chills, etc.

Anthrax or **Carbuncle** is an inflammation of the subcutaneous areolar tissue, which rapidly ends in its sloughing with indolent suppuration, the necrosed tissue forming many cores over the surface of the circumscribed, doughy, and excessively painful swelling, and being discharged together with scanty purulent fluid, through the several corresponding apertures. The surrounding parts

are brawny, reddened, and indurated, and the vessels plugged. They vary in diameter from one to six inches, and occur chiefly about the back and nape of the neck. The inflammatory process is altogether more intense than in a boil, on a larger scale, and accompanied by far more severe general symptoms; but it is usual to distinguish carbuncles from boils by such more or less artificial points as the flattened form, the multiple cores, the relatively great amount of slough, etc.

TREATMENT.—As this affection occurs principally in elderly people and in those who are already much debilitated, and as it produces often extreme prostration, every means should be adopted to keep up the strength by mineral acids—bark, ammonia, quinine, etc., and dietetically by port wine, porter, etc. When seated about the head of old people, the prognosis is often grave, especially if the situation be complicated by the presence of diabetes or albuminuria. Locally, the treatment varies in the different stages. Very early, we may try to check its development (*see Furunculus*) by painting it, or by rubbing in nitrate of silver stick; later on, it is best to firmly compress the walls by strapping and then poultice the summit. If later the pain and tension are intense, free incisions give great relief, and, on the other hand, the sloughs and discharges must not be confined for want of an incision. When a clean granulating surface is left after the clearance of the sloughs, stimulating lotions (*lotio rubra* of the hospitals) or unguents (*ung. resin*, or one with a little balsam of Peru) should be applied.

Atrophia cutis may exist as an idiopathic change, or be secondary to some inflammation or new growth—*e.g.*, lupus or syphilis. The skin becomes thin and wasted, and so depressed below the surface of any surrounding healthy skin, owing to the diminution in size and number of the

elements of the skin ; it also loses its natural furrows, and becomes smooth and shiny. In the atrophic changes of old age (senile atrophy), the loss of the subcutaneous fat causes a wrinkled, shrivelled condition. Atrophy of the skin occurs also as a conspicuous feature of some affections of the nerves —e.g., after injury or in Alopecia areata. Whether the peculiar diseases known as scleroderma and morphœa are to be considered idiopathic atrophies is still uncertain, but at any rate an atrophic process, primary or secondary, is often a very important feature, and the same remark applies to the affection known as *linear and macular atrophy*, or *striae et maculæ atrophiae cutis*, which is very possibly only a phase of morphœa ; at any rate, these macules and lanceolate stripes sometimes complicate morphœa. *Linear atrophy* occurs as glistening white or pinkish, or livid, depressed, smooth or finely reticulated, lanceolate, scar-like streaks or bands, very like the marks left by pregnancy, and from half an inch to two inches broad by several long. They are arranged in groups close to one another in more or less parallel curved lines, and they are found most frequently near the anterior brim of the pelvis, over the gluteals, and on the thighs and arms. Atrophic spots or macules in rare cases exist, uncomplicated by the stripes, though similar in nature, but have a more or less circular shape, and run up to the size of half a crown. A primary red hyperæmic stage has been described. It is thought that the disease may be due to a defect of innervation, but the distribution of the patches seldom fits in with the course of the cutaneous nerves. These atrophic patches must not be confounded with scars.

TREATMENT.—This consists in *gentle* stimulation of the parts by oily liniments, locally and internally, and in paying proper regard to the general health. It is a very chronic affection and of little consequence.

Baker's and Bricklayer's Itch. (*See Eczema.*)

Barber's Itch. (*See Tinea sycosis.*)

Bed-bug Eruption. (*See Urticaria.*)

Boils. (*See Furunculus.*)

Bromidrosis or Osmidrosis signifies a state in which the sweat has a peculiarly stinking quality, and it is usually associated with hyperidrosis, especially of the feet and axillæ. Odors of different kinds, and more or less disagreeable, are also given forth by the sweat in some nervous disorders, in some exanthemata, in acute rheumatism, and in some people at the catamenial period, and whilst the bowels are constipated. The decomposing sweat of some lymphatic and red-haired people is also naturally more odoriferous than in others. Bromidrosis proper may occur in any class of life and in either sex, but is met with frequently in debilitated servants and waiters, and amongst soldiers is often an unbearable nuisance. The peculiar penetrating fetor does not belong to the issuing sweat, but to the decomposing fluid, which soaks into the socks, leather, and clothes, and in which bacteria develop. For the local changes set up in the skin, *see Hyperidrosis.*

TREATMENT.—The methods of proceeding directed for *Hyperidrosis* are often successful, but where the case is obstinate, one of the two following plans may be tried: Hebra recommended that the well-washed and dried foot should be wrapped accurately in linen spread with dia-chylon plaster incorporated with linseed oil. The toes must be separated. This dressing should be removed in twelve hours, the foot wiped and powdered with starch, and the dressing replaced twice daily for eight to twelve days. There ought to be a free desquamation of the cuticle.

Ordinary Emplast. plumbi or saponis strapping, renewed every two or three days, has been found successful in some cases. Dr. Thin suggests a second plan, viz., to soak the frequently changed socks in a saturated solution of boracic acid before they are again used, and at the same time to prevent the saturation of the leather by the use of cork soles similarly disinfected each day.

Canities, or Gray Hair, is commonly seen as one of the natural results of advancing age, but the premature loss or cessation in the deposition of pigment, may also occur under a variety of conditions, as after great mental distress, or from debilitated powers after neuralgia, some nerve-lesions, and in tufts in leucoderma. The new growth of hair following Alopecia areata may be at first without pigment, and there are many remarkable facts recorded with regard to hereditary white tufts, etc.

Callus, Callositas, or Tylosis, are terms denoting the hard, raised, thickened, horny, circumscribed areas of skin, caused by constant friction or pressure on particular regions, occasioned by various occupations. A callus is composed of heaped-up epidermic layers.

Carcinoma Cutis, or Cancer of the skin. Primary scirrhus of the skin is an extremely rare affection, and is characterized at an early stage by discrete papules or nodules varying in size from a pea upwards. Later they coalesce, and the growth may infiltrate an extensive surface. Scirrhus of the skin, however, is often seen as a secondary affection. For the commoner epithelial cancer, see Epithelioma.

Carbuncle. (*See Anthrax.*)

Chilblain (Pernio). (*See Dermatitis.*)

Chloasma is a term which is still used by some to denote *Tinea versicolor*, but it should be reserved for a special kind of pigment hypertrophy. (*See Melanoderma.*)

Chromidrosis is the name given to a very rare condition, in which various regions of the body, but especially the eyelids, are covered with a fine powder of a black, blue, brown, or yellow color, supposed to be deposited from the sweat by the oxidation of indican excreted with it. Each case should be carefully investigated, as the affection is sometimes simulated.

Clavus, or a **Corn**, resembles a callosity very closely in its external features and structurally, *i. e.*, it is a rounded, circumscribed thickening of the epidermis, caused by continued pressure, only it projects inwards in the shape of an inverted cone or "root" to press upon the nerves of the derma and cause pain. If situated in a moist situation, as between the toes, the epidermic mass may be "soft." Inflammation is sometimes set up about corns.

Condylomata, or "mucous tubercles," are really large syphilitic papules altered by the circumstances of the region in which they exist. (*See Syphilis.*) The term Condyloma has also been applied to *Molluscum contagiosum* (*C. subcutaneum*), and to a variety of acuminated true warts sometimes set up by gonorrhœal discharges, but should be kept for these special syphilides.

Cornu Cutaneum, or the Cutaneous Horn, is a hard, dry, outgrowth from the deeper layers of the rete of any region, but very commonly from the scalp and face. The outgrowth is composed of epidermic cells which have under-

gone the true horny change. They grow with a varying degree of rapidity, and may be conical in shape, or become variously twisted and distorted. They seldom occur before middle-life, and are very rarely multiple.

TREATMENT.—Detach the horn and apply caustic to the base whence it grew, or excision is perhaps still better.

Comedones ("black jack," "skin worms") are the black-topped accumulations of inspissated oily matter and epithelium which plug the ducts of sebaceous glands, and almost invariably constitute the first stage of *Acne punctata*. These maggot-like plugs are very often seen disfiguring the face especially, but they may occur in any region where sebaceous glands exist, and the shoulders and chest are most frequently affected after the face. Thick, muddy-looking, greasy, torpid, and inactive skins are most favorable to their formation, and they occur chiefly about puberty in either sex, though their presence is not to be specially associated with the development of the sexual organs, but rather with general causes, such as a peculiar kind of skin, certain constitutional states, such as the lymphatic and strumous diatheses, and with general debility.

TREATMENT. (*See Acne.*)

Dandruff. (*See Seborrhœa and Pityriasis.*)

• **Dermatitis** is a term which has come extensively into use in recent years to denote simple inflammations of the skin, which are distinct in their causation from the special catarrhal inflammation (*eczema*), and from the group of *erythema* and the *exanthemata*. It is most important to recognize the fact that the dermatitis may present simply an inflammatory blush, *i. e.*, be erythematous (and many of the eruptions are still grouped with the *erythema*), or go on to a vesicular or bullous or pustular or gangrenous

stage, and hence the appearances often agree very closely with those of other kinds of inflammation; indeed, we cannot separate many, as far as external features go, from eczema. The tendency of the skin to inflame, too, is also distinctly associated with the general health. The causes of dermatitis are infinite, it may be set up by cold—*e. g.*, chilblains (*erythema pernio*), frost-bites; or by heat—*e. g.*, *erythema vel eczema solare*; by the prolonged contact and rubbing together of secreting folds of skin about the axillæ, mammae, abdomen, neck, perineum, especially in infants and fat people (*intertrigo*); or by violence, especially by scratching; or by contact with various irritating solid, liquid, or gaseous substances, such as, in the vegetable kingdom, the rhus family, thapsia, mezereon, mustard, croton oil, savin, chrysophanic acid; in the animal kingdom, cantharides, the stings of wasps, bees, etc., the burrowing of the itch insect (*see Scabies*), and the biting of lice (*Pediculosis*); amongst minerals, by arsenical compounds, tartar emetic, strong acids, and other caustics. The various eruptions due to the internal administration or the absorption of drugs are also classed under the term *Dermatitis medicamentosa*. (*See Medicinal Eruptions.*)

TREATMENT.—Where indicated the general health must be attended to, and loaded and morbid states of the system relieved and the strength toned up. Locally, the operating cause (heat, cold, irritants) must be removed or prevented acting any further, and as the lesion is an inflammation soothing remedies must be applied (F. 20, 22, 66, 83, 84, 85, 86, 90). If the inflammation be caused by a sting or an acid, an antacid will give relief. The treatment of weeping or chronic infiltrated conditions, is that of eczema. The paralyzed condition of the vessels and the bad circulation in chilblains require stimulation. In intertrigo, the surfaces must be kept apart and very clean, and absorbent powders applied, and in chronic states very strong as-

tringents (nitrate of silver, tannin, sulphate of zinc, etc.) are necessary.

Dermatalgia is neuralgia of the skin, and is unaccompanied by any structural change. It is mostly symptomatic of lesions of the nervous centres.

Dermatolysis, or **Pachydermatocele**, is very closely allied to *Fibroma*. By it is designated a general hypertrophy of the skin and subcutaneous connective tissue, so that soft loose folds, often attaining an enormous size, hang pendulous from the region or several regions from which they grow.

TREATMENT.—Removal by the knife is the only means of getting rid of the growths.

Dysidrosis is the name given to a vesicular disease limited very definitely, as a rule, to *the palms and soles, and the sides of the fingers and toes*; in addition, however, a few vesicles may now and then be present on the dorsal surfaces, whilst a soft red, papular, miliaria-like *general eruption* is an occasional complication. At first the parts feel hot, swollen, and throbbing, and then discrete transparent vesicles, with the deep-seated aspect peculiar to the palms and soles, appear in successive crops, and these coalesce here and there into small bullæ, and these again into larger and larger *multilocular* bullæ, simulating a pemphigus. The whole epidermis now gets macerated, and peeling off discloses a reddened, tender surface, but not a raw, weeping one as in eczema. In this manner the affection runs a pretty definite course, usually of two or three weeks, but in those who are much debilitated, vesicles may continue to appear in a semi-chronic way, and relapses are not infrequent. The subjects of this disease, indeed, are never in robust health, and are either notably weakly and out of

health, or suffering from nervous depression. Young women, especially those with a nervous temperament, are most commonly affected. The disease is more frequent in summer than in winter. The exact nature of this affection cannot be regarded as settled, for as the name *Dysidrosis* implies, the eruption is considered, on the one hand, to be the result of disordered innervation of the sweat glands, so that an excessive secretion of sweat altered in quality fails to escape properly and collects in vesicles, by which state of things some slight inflammation is set up; whilst others hold that it is a localized vesicular eczema from the first; and others again that it is a special neurotic affection, *sui generis*. At any rate, the disease should not be confounded with the localized vesicular eczema of the backs of the hands, in which a few vesicles may appear between the fingers, nor with scabies of the fingers, nor with ordinary pemphigus localized to the hands.

TREATMENT.—This must depend on the view taken of the disease. Those who regard it as a sweat disease give at first diuretics and mild saline purgatives, and then steadily brace up the system by ferruginous tonics, quinine, bark, strychnine, etc., according to circumstances. Locally, in mild cases, belladonna liniment is useful, but if the attack is at all severe it is best to allay pain and macerate the thick cuticle by belladonna fomentations, or F. 18, or even a few poultices; and when the sweat is released to apply soothing and cooling unguents or lotions (F. 20, 86, 84, 85), which should contain a bland oily matter to prevent the drying up of the young skin.

Ecthyma is characterized by the development of one or more scattered, isolated, painful pustules, with an inflamed areola and hard base, about the size of a fourpenny piece. The contents are at first purulent, and afterwards become mixed with blood, so that the crusts which are rapidly

formed are thick, large, and dark colored. The pustules also have a peculiar shape, for they are not tense and dome-shaped as with pemphigus bullæ, but flat. As a rule, the inflammation is very superficial, and only some pigmentation and a temporary scar, if any, is left; but occasionally, in very cachectic subjects, the ulceration beneath the scab is unhealthy and deep. Ecthyma is not infrequently seen as an idiopathic disease, especially as one or two pustules about the knees of children, and is not usually very widely distributed, but confined to the extremities or trunk. It is also frequently met with as a secondary feature in scabies and phthiriasis. It occurs at all ages, and is essentially an affection of the badly nourished and cachectic. Ecthyma must not be confounded with the pustules excited by the inoculation of pus about unhealthy children, with the vesicating chilblains about their fingers, with impetigo contagiosa of the face and other parts, with the aggregated, numerous, and smaller pustules of eczema, and especially with the comparatively rare, large, flat pustular syphilitic derm, which is a more chronic affection, and dries into large black crusts in layers (*rupia*) displaying deeper, sharply cut, unhealthy ulceration beneath.

TREATMENT.—If the ecthyma is secondary to scabies or phthiriasis, the parasite must first be destroyed by a mild parasiticide (*e. g.*, F. 109, or balsam of Peru), and the depraved constitutional condition met by cod-liver oil and tonics. These general remedies, with good food and a staying, if possible, of any debauched habits, are necessary in idiopathic ecthyma, whilst the eruption is generally easily healed by applying a simple astringent salve (F. 52) to which a little balsam of Peru may be added after the scabs have been removed. In cases where marked ulceration exists a few applications of iodide of starch paste (F. 36) or iodoform (F. 37) are necessary.

Eczema is a usually chronic, sometimes acute, non-contagious, inflammatory disease of the skin of the catarrhal type, with important constitutional relations, accompanied by more or less itching and burning, and characterized by the formation of either erythema-like patches, papules, vesicles, pustules, or fissures, or a succession or mixture of all or several of these lesions. Eczema is not to be confounded with the many phases of *dermatitis* set up by various local irritants, such as by lice, the itch insect, dyes, cold and heat, etc. (so-called *Eczema artificiale*), and closely resembling it in the local pathological process, nor with other dermal inflammations, such as erythema, erysipelas, and pityriasis rubra ; for eczema is nowadays distinguished as a specific disease, characterized by a special inflammation of the skin, and, as it has been well remarked, these inflammations bear no more relation to true eczema than the inflammation of a sprained joint to true rheumatism. Consequently, we now exclude, amongst other things, the so-called grocer's and baker's itch, and lichen planus et ruber, and include much of what has been known as impetigo. To thoroughly understand this disease we must get rid of the idea that the formation of vesicles is a necessary or even a very common lesion, and also regard the protean lesions as really of secondary consequence ; but, on the other hand, we must lay hold of the idea that it is the analogue of the catarrh of mucous membranes, and that consequently the most conspicuous local feature is *the infiltration into the substance of the skin, the exudation of ordinary inflammatory serous fluid, stiffening and staining linen, and its crusting on the surface*. This transudation and infiltration of serous fluid causes swelling and thickening of the tissues, and a brawny feel, if it does not escape on the surface, or if the inflammation be long-continued or wherever the tissues are lax ; it sometimes collects on the surface in vesicles, and more frequently it exudes either after

rupture of the vesicles, or the removal of the cuticle by excoriation or otherwise. If the discharge be profuse enough it runs away, but if less abundant it dries on as crusts, and the latter vary in amount and aspect with the admixture of sebum (on the scalp) and epithelial débris, of coagulable matter, of blood-cells, and the pus-cells, which are especially abundant in children and the scrofulous. Even where the skin is not notably thickened, the infiltration is shown by the dirty yellow color left after the blood is pressed out of the part. Another very constant symptom is *disordered sensation*, *i. e.*, a burning heat in the acute stages, and intolerable itching or incitement to scratch in the more chronic cases or later stages. The early manifestation of these disordered sensations is held by some to point to primary nerve disturbance, as the later itching is due to local interference with the nerve functions by the infiltration. The protean eruptive lesions may be referred to one of the following categories. First, there may be *Erythema* or *congestive redness* of the skin in variously sized patches, or in a more diffused form, and attended by more or less infiltration and desquamation (*E. erythematosum*). This constitutes the earliest stage of eczema, and as the sole lesion present, perhaps involving the face and neck, is rare. Its coarser and most exaggerated phases are nearly allied to the scaly areas of a dull-red color, characteristic of a declining eczema which has ceased to discharge (*E. squamosum*). In these squamous varieties, which may be confounded with a patch of chronic psoriasis, the dryness and infiltration and loss of elasticity cause each movement of the part to tear open a painful fissure or crack—*e. g.*, about the hands, and to this phase the name *E. rimosum vel fissum* has been applied. Secondly, soft red papules, mostly of the size of a millet-seed, may be seen either as prominent points on an erythematous base, or studded over the surface of the skin, and are caused by the special congestion of the

vascular loops and lax structure around the follicles (*E. papulosum*). Many of these papular eczemas were formerly called lichens, as was also the case with the papular dermatitis set up in washerwomen, bakers, grocers, bricklayers, etc. Thirdly, vesicles (*E. vesiculosum*) and pustules (*E. pustulosum*) may form, and they tend to be very closely aggregated together, and to very quickly rupture. The pustules are of similar formation to the vesicles, only they contain more pus-cells, and are often only a later stage of the vesicle. It is very essential to recognize this fact clearly, because *E. pustulosum*, or, as it has been called, *E. impetiginosum* or *impetiginoles*, presents many peculiar features in the character of the scabs, etc., and as seen frequently about the face and scalp of children, many find a difficulty in recognizing it as an eczema. Fourthly, a raw, red, weeping surface (*E. rubrum vel madidans*), dotted over with minute red points, is a very common feature, and is often seen on the legs, and may result from the confluence and rupture of preexisting vesicles or pustules, or frequently from the separation of the cuticle by the excessive serous exudation. This discharge either dries on the surface into crusts, or is thin and abundant enough to run away. There are also some secondary features of eczema, which are occasionally seen, that should be noticed, viz., the hypertrophy of a part (*e. g.*, the legs) from very chronic infiltration (*E. hypertrophicum*), and warty overgrowths in old patches (*E. verrucosum*). Now a case of eczema commonly presents several of the features just described as successive stages in its course; thus an erythematous condition sets in, which is followed by papulation and vesiculation, and is succeeded by discharge from a red, raw surface, and crusting, and finally desquamation. Or, again, it is not uncommon to see several phases side by side, or less frequently any one of these several phases may constitute the chief feature, and what is commonly only a stage may persist in that phase.

The varieties of *eczema* have been variously classified according to their distribution, configuration, aspect, suspected cause, and so forth ; but the majority of observers now accept the arrangement given above as the most convenient one, although it may be repeated again that the conditions denoted by these terms constitute, as a rule, only a stage of the eczematous inflammation. Eczema may be, more or less, *acute* or *chronic*. Really *acute eczema* is comparatively rare; and as seen about the face, for instance, may be ushered in by febrile symptoms and considerable malaise. The skin becomes reddened, but, except about the eyelids and regions where the tissues are very lax, the parts are only moderately swollen. Suddenly vesicles evolve with a severe burning sensation, and in about a week or ten days the eruption dries up, and the swelling and redness gradually subside, leaving more or less desquamation (or crusting in children) and itching. The attack may subside into a chronic condition or present recurrences, and this latter feature is very characteristic of some forms of eczema. It may occur on any part of the body, but especially about the face, genitals, and backs of the hands, and is rarely of very wide distribution.

In *subacute eczema*, the inflammatory process is less intense, and the itchy, reddened surface is studded with papules, perhaps mixed with vesicles, and scratching gives exit to the fluid which infiltrates the tissues. Eczema is far more commonly a *chronic* disease, and it is generally said that it does not tend to spontaneous cure ; but one great reason for its continuance, besides the persistence of its cause, is the incessant scratching, which goes on even during sleep, to relieve the intolerable itching which is set up by the infiltration. The eczematous inflammation may persist in some regions, or recurrent outbreaks may keep up the disease. Any of the forms of eczema may be chronic, but the vesicular phase is more characteristic of an acute attack,

although copious weeping is not an uncommon feature, especially from the legs. There are some remarkable features in the distribution to be noticed, for although eczema may attack any region, and either be localized to a single patch, or, in very rare cases, be quite or almost universal, it is essentially a symmetrical disease, and especially attacks the flexor surfaces in preference to the extensor, the scalp, and face of infants, and the face, hands, and forearms, the genitals, and legs of adults. It attacks all classes and conditions of people, and is met with at all ages. In infancy eczema is very frequent; but beyond the existence of some special exciting causes, its predilection for certain sites—*e.g.*, the head and face, and its pustular character, there is no essentially distinctive feature about it.

With regard to the *causation* of eczema, it does not appear to be hereditary, although certain states, such as gout and scrofula, with which it is intimately associated, frequently are so. Some regard eczema as almost purely a local disease of the skin, others as almost wholly of constitutional origin, and others again, as brought about by a combination of these causes. Those who look to its constitutional origin cannot as yet point out any one definite systemic change or state of which eczema is an expression; but they are pretty well agreed that *debility*, in some form or other, underlies the disease, and the lowering of the nutrition of the skin giving rise to eczema has been referred to three main conditions, viz., a gouty state, struma, and neurasthenia. What is meant by the gouty state here is rather the continued imperfect assimilation and elaboration and suboxidation of the food, and the imperfect removal of effete products, either brought about by food improper in quality or quantity, or by certain functional derangements of such organs as the stomach and liver. Active gout is only an advanced link in this chain, and the recognition of the connection of true gout with eczema is very

old. Consequently, in very many cases of eczema, the evidence of these conditions is shown in different forms of dyspepsia, bowel irregularities, continued excess of lithates, uric acid, oxalates, or phosphates in the urine, etc., and this is no less true of infants than adults. Struma is another cause of the lowered nutrition underlying eczema; but probably this has been so insisted on because of the pus formation in the eczema of children, which is not necessarily due to such a cause, though certain flabby, blue-eyed children with fair hair are most subject to the disease. Thirdly, it seems clear that eczema is caused by a diminution of the normal nerve influence exercised over nutrition, which may be conveniently described as nervous debility or neurasthenia. This is as yet ill-defined; but the effect of nervous strain, or excitement, and generally weakened nerve power is undoubted. Such cases of eczema in persons of nervous temperament are frequently recurrent throughout life. The connection of asthma and eczema has been long noted. Such disturbing causes as worms, dentition, uterine troubles, and vaccination, also seem to play their part; whilst local venous congestions in the legs, anus, and vagina, certainly are favorable to its appearance.

The *diagnosis* of such a multiform affection as eczema must be carefully made, both by the recognition of its symptoms and by the exclusion of other diseases, because all the symptoms noted may occur in other affections. The occurrence of exudation and infiltration at some period of the attack, as here described, is, however, very characteristic. A brief *résumé* will be here given of diseases likely to be confounded, and for further information the reader is referred to those diseases. Acute eczema, which is usually vesicular or pustular, must be distinguished from the artificial inflammations induced by plants, croton oil, poisonous dyes, etc., etc., for it has been explained that the pathological process in the skin is quite similar to that of eczema.

These simple inflammations, however, disappear on the removal of the cause, unless much infiltration has occurred from the long continuance of the irritation, and then such a patch resembles the squamous variety of eczema.

In erysipelas, which is accompanied by acute fever and constitutional disturbance, there is no surface discharge except what collects in the bullæ, though there is often much infiltration of the skin. Sudamina and miliaria, particularly in rickety infants, might also possibly be mistaken for vesicular or papular eczema; and dysidrosis of the palms especially has to be diagnosed from the recurrent form of eczema which chiefly occurs on the extensor surfaces. Scabies is a chronic multiform eruption, constantly presenting itself for careful diagnosis; but, even in the absence of cuniculi, the history of contagion, the intense itching at night, the sites involved, the absence of infiltration, and the usually discrete and non-patchy nature of the eruption, will generally decide us. In children, where scabies eruption is more patchy, eczema almost invariably involves the head. Amongst crustitial eruptions, we may mention the pustular inflammation of the scalp and face, arising from pediculi (in children especially), impetigo contagiosa, the crustitial syphilide of hairy parts, which usually leaves scarring, and, lastly, sycosis.

Erythema multiforme is too characteristic to be confounded, and so are the later ringed stages of ringworms; but the early erythematous blotches, and some cases of so-called eczema marginatum, can only be distinguished microscopically. Of itching papular eruptions we may mention prurigo, which avoids the great flexures, and is persistent, but in old people it is difficult to diagnose sometimes. The chronic characteristic papules of lichen planus may be lost in roughened aggregated patches, and so with old chronic squamous patches of psoriasis and syphilis, especially about the palms of the hands. In doubtful cases the pre-

vious history of eruption must be carefully inquired into. The sites occupied by intertrigo are characteristic. Seborrhœa of the scalp does not weep, but on separating the fatty plates, a gray sound surface is usually seen ; on the body, the greasy patches of seborrhœa oleosa give more trouble. Lastly, we must allude to the great difficulty of diagnosing some cases of absolutely universal eruption, such as pityriasis rubra, pemphigus foliaceus, eczema, and psoriasis ; the latter, however, is only a curiosity. The intractable so-called Eczema mammæ, so frequently associated with malignant disease of the breast in women, is probably a special kind of inflammation and not a true eczema.

TREATMENT.—Eczema is a curable disease tending to run through certain stages, and in some cases disappear spontaneously ; but in a very great number the disease persists for weeks, months, or years, by successive attacks or a chronic evolution of eruption. In every case it is necessary to understand about the habits, diet, mode of life, and occupation of the patient, the past medical history, and the character of the constitution. The treatment must be both constitutional and local, for, although it is true that merely local measures suit those cases which are tending to disappear naturally, and such cases as persist after the exciting cause has been proved, still, internal medication is decidedly called for in the majority of instances.

General Internal Measures.—The fact should never be lost sight of that eczema chiefly attacks the anaemic and debilitated, and that lowered nutrition is at the bottom of it, although it is difficult or impossible to put one's finger on the direct cause in every case. Therefore a careful search should be made for the existence of imperfect digestion and assimilation, and a gouty or rheumatic habit, and the kidneys and bowels should be watched for any sign of deficient or morbid excretion.

Intemperance in diet, either solid or liquid, or, on the

other hand, want of proper food, or the existence of any debilitating influence, such as overwork and anxiety, or very sedentary habits, must be noted and corrected. The bowels must be kept properly open and the flow of the bile free, but purgatives, though useful at the outset of an attack, or, now and then, as an adjunct to other treatment, are debilitating if overdone. In a gouty habit of body, with a high-colored urine loaded with lithates, or if there is excess of uric acid present, alkaline remedies are sometimes very useful, such as liquor potassæ.

Diuretics are called for to relieve the skin where the weeping is excessive and the tissues swollen, or when the urine is scanty, and the alkaline salt, bicarbonate of potash, and the neutral acetate of potash, are the best for their combined alkaline and diuretic effects. In a somewhat different class of cases, the digestion needs strengthening by mineral acids, pepsine, bitters, or mild alkalies. But these medicines will not, as a rule, effect a cure, and when the stomach, liver, and bowels, and the kidneys are all acting well, then we must proceed to build up the system with cod-liver oil (especially if struma be present), ferruginous tonics, quinine, strychnine, etc.

Arsenic is especially useful in chronic cases, particularly when the inflammation is dry and scaly. *It should not be given in acute cases*, and not, as a rule, before the stomach and emunctory organs are set in order. In some very chronic cases tar and perchloride of mercury have been found to exercise a good alterative effect. Change of scene and air is often necessary, and at the various Spas this change is to be found associated with appropriate treatment in the waters.

Locally, before we select any application, we must recognize the stage of the disease, and clearly understand what it is we want to do, whether to protect or dry up discharge, or soothe the inflammation, or soften up the skin, or astringe

the vessels, or stimulate the circulation and resolve the infiltration. Now, eczema is an inflammatory disease, and, therefore, in all its acute and subacute phases, soothing applications must be used (F. 20, 64, 84, 85, 86, pure vaseline, 22, 44, 83, 90). If it is desired to dry up excessive discharge, absorbent powders are best, and sometimes a lotion is the most convenient application.

Ointments are indicated in the drier stages, and here the necessity for keeping the inflamed skin thoroughly supple and prevent it drying up and cracking is to be noted. The inflamed skin must be cleansed with soft water or gruel or a camel's-hair brush, for sometimes it is so sensitive that hard water, soap, and certainly salt water act injuriously. The purest glycerine, too, in applications is apt to irritate. Crusts should be cleansed away by bathing or by poultices before any remedial application is used, and it should be borne in mind that the discharge should be disinfected as far as possible, and not be allowed to remain and decompose. The morbid condition often passes away under soothing applications alone, but sometimes mild stimulants (F. 25, 48,) or astringents (F. 40, 39, 41, 42, 49, 80) are useful to restore the tone of the vessels, or stronger ones such as F. 31, 73-8, 79, 53-5; F. 52 and 57 are good to dry up limited purifluent surfaces as in impetigo contagiosa. Strong stimulants and resolvents (68, 62, 75, 74) must be brought to bear for the removal of a sluggish chronic infiltrated patch. The alleviation of the intolerable itching and burning taxes all our resources, and in addition to the forms referred to above, F. 18, 65, 93, 23, 26, 29, 30 will be of use. Scratching is a powerful agent in keeping up eczematous inflammation, and as patients cannot restrain themselves, especially children, the surface must be protected by linen or thick lint (not by oil silk) on which a salve is spread. In extensive cases of eczema, baths are very desirable and soothing, taken before going to bed (F. I.

a. b. d. e. f.). Opiates and narcotics do little good unless sleep is induced, but cannabis indica is of value. (F. 150.)

Elephantiasis Arabum must not be confounded with the totally dissimilar disease, *E. Graecorum* or True Leprosy (*see Lepra arabum*). True *E. arabum*, or "Barbadoes Leg," or "Tropical Big Leg," is essentially a disease of tropical and subtropical regions; but a condition clinically indistinguishable from it occurs sporadically all over the world, and is at present included with it, although the form seen in temperate climes has not yet been proved to have the same causation. Further, the term Elephantiasis covers a multitude of "giant growths," or hypertrophic conditions, mostly resulting from congenital structural defects, viz., Elephantiasis telangiectodes and lymphangiectodes, or acquired obstructions of the lymphatic system, but also including some cases of chronic *phlegmasia dolens*, and hypertrophy originating in *chronic eczema* and *varicose veins*. The disease declares itself by an erysipelatoid attack in the limb or part affected, which becomes during the febrile attack ("elephantoid fever") reddened, hot, painful, oedematous and brawny, and swollen. Red lines or knotty cords up the limb often trace out the inflamed lymphatics, and the related glands become swollen and tender, though they may already show enlargement. In a few days the constitutional symptoms subside, and the local swellings also or not entirely. Again and again at uncertain intervals the attacks of lymphangitis with lymphatic oedema recur, each time leaving some additional hypertrophy of the part, so that it gets thickened, hard, warty or rugose, with folds, beneath which dirt and offensive discharges collect, and hence the comparison to the elephant's leg. Thus a scrotum has been known to attain a weight of 110 lbs., and reach to the ground, and a limb to measure thirty-six inches in circumference. The lymphatics may become dilated and varicose, and rupture,

discharging lymph, and foul ulcers may form on the diseased limbs. The part of the body preëminently attacked is the leg, but the hypertrophy may occur in the scrotum, penis, labiæ, and much more rarely in the hands and arms, and occasionally in more than one part at a time, as the scrotum and leg.

A variety of the disease affecting the scrotum, and frequently associated with haematuria and chyluria, is known as "lymph scrotum," "naevoid elephantiasis," and "varix lymphaticus," from the peculiarly varicose condition of the lymphatics. The remarkable researches of late years, and especially those of Dr. Manson, of Amoy, seem to leave little room for doubt that Elephantiasis arabum of tropical and subtropical regions and lymph scrotum are only members of a series of "elephantoid diseases," including chyluria, hydrocele, lymphatic abscess and varix, and enlarged and varicose glands, and that these are caused by the more or less complete blocking of some lymphatic vessel or gland either by parent worms or by their embryos. It appears that these embryo worms, in an advanced stage of development, are taken into the stomach in drinking-water, bore their way into the lymphatic system, and work up-stream to find a suitable habitat. There they (probably male and female) may live and breed, over many years, countless successive progenies of the microscopic worms known as *Filariae sanguinis hominis*, which find their way through the glands and lymph-vessels to the blood current. These filariae appear in the blood current from sunset to sunrise, and in the day are absent, but what becomes of them is not well made out as yet. The presence of the parent worms may not cause any mischief, because the diameter of the embryos allows of their passage through the lymph apparatus; but if the embryos escape prematurely from the mother, and the shell of the ovum be not adjusted in a normal manner to form the sheath of the embryos, then

the latter cannot pass the glands, but form plugs damming back the lymph. The great variety of diseased conditions is due to the site and completeness of the obstruction. The diseases are, so to speak, a mere accident of the presence of the worm, for the latter may be undoubtedly present for long periods without causing any disease. Elephantiasis arabum may progress for many years, and is not in itself fatal, though complications and intercurrent affections supervene frequently on the exhaustion induced by it.

TREATMENT.—Very much relief may be afforded by continued rest and elevation of the diseased part, by prolonged elastic bandaging, and by inunction of resolvent applications. Compression and ligature of the main artery of the limb have been tried with variable success, and doubtless these methods may prove useful in the elephantiasis of temperate climes. Now, however, that we know the true cause of "tropical big leg," we must turn our efforts towards prevention by systematic careful filtering, boiling, and re-filtering the drinking-water whence the parasite comes. Intractable and unwieldy limbs and scrota should be freely removed by the knife.

Epithelioma (Epithelial Cancer) of the Skin.—The **Penetrating Epithelioma** selects by preference the lips (lower lip 90 per cent. of all cases), the scrotum, the penis, or about the anus, but it may commence anywhere on the surface. It is far oftener seen in the male than the female, and is not met with, as a rule, until after thirty, and more commonly about the age of sixty. The morbid process may begin in an obstinate crack or fissure, in an irritable scar, a little hypertrophic nodule, a wart, or a mole, and frequently takes its rise in some persistently irritated spot. If it commences as a tender lump—*e. g.*, in the lower lip, it increases and gradually ulcerates in the centre, and the ulcer deepens and extends to form a more or less rounded ulcer with dirty

foul base, discharging a thin fluid. The base of the ulcer may after a time sprout out into a fungus mass, or the growth may take on this fungating character from the first, or almost the beginning, as about the genitals. After a time the glands in immediate connection with the growth become implicated, and the disease can no longer be considered a local affair. The epithelioma as it extends may gradually attack the soft structures, and even the bones, but as a rule life is terminated before this occurs, *i. e.*, in a few years, either by cachexy, intercurrent affections, or secondary deposits. On the back and some other parts, however, removed from the orifices of the body, the growth has been known to pursue a chronic course for many years. About the lips there is an occasional possibility of a syphilitic chancre being taken for an epithelioma, especially as in this situation the chancre may be surrounded by a considerable amount of circumscribed swelling, and the shallow ulcer have sloping indurated edges, with a foul, slightly discharging base; and so about the genital regions a "vegetating syphilide" may closely resemble the fungating epitheliomatous growth, but in the former the glands are very rarely enlarged.

The Superficial or Flat Epithelioma is known in this country as Rodent Ulcer, and has some remarkable clinical characteristics, if not pathological differences. First, it is practically confined to the upper two-thirds of the face, *i. e.*, above a line drawn from the nostrils to the lobes of the ears, though it occasionally appears elsewhere on regions removed from the mucous surfaces; secondly, it pursues a remarkably chronic course; and thirdly, the glands are practically never secondarily involved. This form also begins in a nodule, or wart, or mole, which gets irritable, and is scratched. A tiny scab forms, and is again torn off, and so on, but without specially attracting any

attention. So matters go on often for years, until the nodule attracts notice by its increased irritability and size. If left, the growth extends superficially, and more slowly in a deep direction, and ulcerates in the centre, leaving a smooth base, and hard, almost cartilaginous, whitish, rolled edges, which are highly characteristic. So the growth and concurrent ulceration extend, destroying soft tissues and bone, till life terminates by haemorrhage or intercurrent disease. The base of the ulcer occasionally shows more or less fungation. Now, whilst mostly considered only a variety of epithelial cancer, determined by the site on which it arises, some think that it is a different kind of growth—*e.g.*, an adenoma of the sweat glands, or that the term includes several kinds of semi-malignant growth with different origins. A typical *Rodent Ulcer*, intractable to all ordinary healing measures, can hardly be confounded with any other disease, except perhaps about the nose with an ulcerating syphilide or patch of lupus vulgaris, or a chancre.

TREATMENT.—The penetrating epithelioma should be thoroughly removed before the glands are implicated. Under these circumstances freedom from return has been experienced certainly for very many years, if not permanently. The rodent ulcer should be completely removed by the knife, or thoroughly destroyed by caustics (F. 5, 7, 8, 9) or the cautery.

Erythema is a term which, like eczema, is loosely applied even at the present time to a number of affections bearing in common the feature of presenting an inflammatory blush—*e.g.*, the erythematous stage of true eczematous inflammation, very slight and early forms of lupus erythematosus, slight inflammatory eruptions (*E. simplex*), such as the *E. lœve*, appearing on distended anasarcaous skin, and various forms of dermatitis from that produced by a mus-

tard plaster to that set up by the contact of aniline dyes (*see Dermatitis*). The red blush also seen in active hyperæmia of the face from dyspepsia, and the passive hyperæmia resulting from mechanical obstruction to the passage of blood in the legs, are also usually included. Here we shall describe under the term *Erythema*, only the diseases known as *E. multiforme* (Hebra) and *E. nodosum*, which are characterized by areas of active hyperæmia and exudation in the tissues, the fluid only in rare instances escaping on the surface in the form of vesicles or bullæ. *Roseola* and *Urticaria* may also, for the present at least, be included. The four affections form a class by themselves, with the characteristics mentioned in the chapter on *Classification*.

Erythema multiforme is a non-contagious disease, running an acute course, and ushered in usually by general malaise, chills, rheumatic symptoms, and some feverishness, which is relieved by the outbreak of characteristic red inflammatory eruptions of various sizes, but mostly circular outline. If the eruption is only a blush, or is very slightly raised, it is called a macule, and generally rapidly clears in its centre, leaving a ring (*E. annulare*), or one ring may develop within another, and they may present, as they fade, a play of colors (*E. iris*), or coalesce to form patterns (*E. gyratum*). If the border be very well marked and lumpy, it is called *E. marginatum*. Then the inflammation may be more concentrated, as it were, into raised papules (*E. papulatum*), or even nodosities, or tubercles (*E. tuberculatum*), according to the amount of exudation, and such papules may be grouped in crescents, but are usually discrete. Lastly, in rarer cases, the inflammatory exudation may terminate in the production of vesicles or bullæ (*vesicating erythema*). The sites favored are the extensor aspects of the hands, and arms, and legs; but it is seen on the face, and no region is exempt. The eruptions last from

a few days to two or three weeks, and gradually fade away, leaving some desquamation and pigmentation; very rarely, the eruption is more chronic. Recurrences are met with in some cases, and spring and autumn seem specially favorable to the onset of the disease. The term *E. multiforme* is applied because, although the lesions in any given case may be all or nearly all of one pattern, very frequently all sorts and sizes are mixed. The vesicating forms must not be confounded with the vesicular *Tinea circinata*.

Erythema nodosum is a very closely allied affection, and indeed because of the similarity of the general symptoms and the type of inflammatory eruption, and because nodose swellings occur now and again in *E. multiforme*, which are indistinguishable from those of *E. nodosum*, some authors include the two disorders under one head. It is, perhaps, well, however, to separate them, as *E. nodosum* occurs specially in children and young adults, does not tend to recur, and, though the eruption may occasionally be widely distributed, the eruption favors particularly the legs and sometimes the arms. The eruption is ushered in by some general malaise, and is accompanied often by considerable constitutional disturbance, and, indeed, in some cases, marked rheumatic symptoms with pleurisy, endocarditis, etc. It is almost invariably an acute disease, lasting two to four weeks, occurring in weakly persons, and the eruption, which comes out in two or three crops, consists of isolated, nodose, painful and tender, quasi-boggy, red or livid inflammatory swellings, in size from a filbert to a pigeon's egg, or larger. These characteristic swellings, which can hardly be explained by their occurrence in lax tissue, display, as they fade away, the changes of hue so commonly seen in this class of inflammatory eruption.

TREATMENT.—This consists in rest, and avoidance of exposure, and restriction to simple diet. A loaded state of the system must be relieved by such remedies as alkaline aperients and diuretics, to which some colchicum may sometimes be added, and any tendency to constipation should be rectified by mild saline aperients, and as soon as possible the weakly habit should be remedied by quinine, strychnia, iron preparations. Locally soothing, cooling, and slightly astringent remedies may be applied, either as lotions (F. 15, 18, 22, 44, 83) or dusting powders (90 *et seq.*), and sometimes warm fomentations, with or without belladonna or poppy-heads, are very grateful. The adoption of the recumbent position often affords much relief in *E. nodosum*.

Erythema gangrenosum. (*See Gangrene.*)

Favus. (*See Tinea favosa.*)

Feigned Eruptions.—It is necessary to be on the alert to detect skin affections which have been artificially induced or simulated by morbid persons or those desirous of exciting sympathy, and especially by hysterical girls. Usually, however, suspicions are excited by the chronicity of the affection, its bizarre appearance, and its departure from the usual types of eruption. We may here point out that these simulations, which are of rare occurrence, generally take one of the following forms: The eruption is in erythematous or excoriated patches, such as may be produced by rubbing or by mustard; or bullous, or pustular, or more or less deeply ulcerative, and such as could be caused by the application of cantharides, croton oil, or some corrosive acid; or such an eruption as could be brought about by the constant and forcible use of the finger-nails; or it is a pigmentation—*e.g.*, simulating chro-

midrosis, produced by black-lead, candle-black and grease, and other compounds.

Fibroma, formerly known as *Molluscum fibrosum* and *Fibroma molluscum*, is an affection of the skin, characterized by hypertrophy and outgrowth of the connective tissue from the deeper layers of the corium or the subcutaneous tissue. As single tumors, growing from the shoulder or mammary region, they are not uncommon, and then they may attain a very large size, but occasionally cases are seen where enormous numbers stud the greater part of the surface, especially of the trunk, in every stage of development, and with wide diversity of shape and size. They commence as little soft protrusions of the skin, and as they grow to the size of a pea, nut, orange, or fist, they assume various forms, mostly of a rounded or ovoid shape, and become pedunculated and pendulous. They are covered at first by integument of natural appearance, but later the covering skin may become wrinkled or corrugated, or tense and atrophied; at the same time they may acquire a more or less livid or pigmented aspect. They grow without pain or tenderness, they are freely movable with the skin, and in consistence they vary according to their size and age, the younger ones being usually soft and flabby, and the older ones pretty firm. The course of development of each individual tumor is usually very chronic, and new ones may appear continuously over many years, but sometimes great numbers evolve rapidly. Old tumors may ulcerate. Fibroma is seen at all ages, but chiefly in adult and middle-life; in both sexes, and in all races, but perhaps, like keloid, it is commoner in the dark-skinned. The general health remains unaffected, as a rule, but Hebra noticed these subjects were often stunted physically and mentally, and the latter point has been frequently corroborated. Lastly, fibroma has been recorded

in several members, and also in several generations of a family. The tumors consist of fibrous tissue in various stages of development and condensation, *i. e.*, the younger ones usually consist of young gelatinous connective tissue, the older ones have an admixture of denser fibrous tissue, and the old ones are composed pretty uniformly of moderately dense tissue. What part the sebaceous glands play in these tumors is not quite clearly determined, for frequently enormously hypertrophied glands are found deeply embedded in the growth, and the dilated openings of the ducts are sometimes conspicuous on the surface. It is held by some observers also, that these growths arise in constant relation with the sheaths of cutaneous and other nerves. Fibromata, whether occurring as single or multiple tumors, must be distinguished from lipomata, true neuromata, cutaneous cysts, dermatolysis, and elephantiasic growths.

TREATMENT.—But little can be done to prevent the evolution or the growth of the tumors. If any growth be inconvenient from its size or situation, it can be removed by the knife or by ligature.

Flea Eruption.—The bites of fleas excite a tiny erythematous spot, in the centre of which is a darker red hemorrhagic punctum. The erythematous areola soon fades away, and the hemorrhagic punctum persists for a time. The surface may be covered with an innumerable quantity of these spots, and it is not an unknown circumstance that purpura or scarlatina has been diagnosed. The flea may excite wheals in children.

Fly Eruptions.—Under this head we will briefly refer to the fact that various kinds of winged insects inflict bites on the skin, and some occasionally lay their eggs in the human skin. Thus, several species of gnats, midges, and mosquitos bite the skin to suck blood, and raise in-

flamed papules or nodules or bullæ, simulating pemphigus or herpes iris, or pustules like impetigo. The amount of accompanying irritation and inflammation varies much in different people. A weak bichloride of mercury or ammonia solution is a good application, and these insects dislike essential oils. In Great Britain rarely, but in South America more frequently, the "bot fly" deposits its eggs under the skin, and causes the formation of boil-like swellings of different sizes. The larvæ in these cases may wander for a considerable distance beneath the skin.

Fragilitas crinium is an exceedingly common condition of the hair, and the atrophic process which gives rise to it, though the exact *modus operandi* is not as yet determined, brings about several varieties. Thus the term may be taken to include inequalities in the shaft of the hair, and these may occur at very regular intervals, also the disposition of the hair to split up at the free ends; and lastly, a condition known more particularly as *trichorexis nodosa*. In the latter case, the hairs of the face, axillæ, pubic region, or scalp—and it is of very frequent occurrence—are seen to present in their course little swellings, often of a white aspect, and suspected to be "nits." When examined under the microscope, these nodes are seen to be caused by the splitting and fraying out of the fibres of the hair at certain points, so that their ends interlock like two besoms pressed together end to end. The whole length of a hair may be studded with such nodes, and the hair readily breaks at these points. In very marked cases the hair becomes much entangled. The condition is met with at all ages, and is apparently due to intermittent and imperfect formation and conversion of the cells going to form the hair.

TREATMENT.—It is extremely difficult to cure, and shaving, where possible, seems to be the best thing to do.

Mildly stimulating applications (F. 52) appear to do good in some cases.

Framboesia (*framboise*, a raspberry), or **Yaws** (an African word with a similar signification), or **Pian** (French West Indian Colonies), is a contagious, non-hereditary disease, *sui generis*, distinguished by a special history and very characteristic eruption; endemic, as far as present knowledge goes, in some of the West Indian Islands, especially Dominica; in parts of Brazil, and parts of the Spanish South American Colonies ("bubas"); in some valleys of the Peruvian Andes ("verrugas"); in the Fiji ("coko") and Loyalty Islands, New Caledonia, and other Melanesian Isles; in Ceylon ("paranghi disease," from *ferenghi*, meaning foreign), and along the Coromandel Coast, in the East Indies, in the Moluccas, and in Africa, on the West Coast, about Sierra Leone, etc., and on the East Coast, along the shores and in the islands of the Mozambique Channel. It prevails especially amongst the blacks, but is seen also in colored races, and rarely in whites who have lived in intimate contact with those affected. Its cause is not definitely determined, but the weight of testimony goes to show that it does not arise *de novo* from bad water, faulty diet, or insanitary conditions, but that every case is contracted by the inoculation of a specific *virüs* from an antecedent case, through some wound or abrasion of the skin, however slight. After inoculation, the site may heal or take on morbid action, and after an incubation period of one to ten weeks (minimum period one or two weeks, Nicholls), the characteristic eruption appears, but this is preceded, according to some, by febricula, pains in the joints, and a more or less general harsh condition of the skin with brawny desquamation, which may be temporary or persist.

The eruption appears as pin-head sized papules, which gradually enlarge to the size of small peas, and split the

covering epidermis into segments, disclosing a central, yellowish, softened point. As the papules continue to enlarge and mature, and the central softening portion extends, the viscid secretion, which has a characteristic odor, incrusts on the surface of the more or less rounded flattened mass, and the crusts gradually drying, deepen in color. These eruptions may attain the size of the palm of the hand in some instances, and are rarely painful. If the crusts be detached either a foul ulcer is disclosed, or the characteristic fungating surface, whence the name framboësia was derived. Dr. Nicholls lays much stress on the crusts in the early stages, but in old-standing eruptions they may be absent. The appearances, no doubt, are multiform, and differ in various countries under conditions of chronicity, age, and health of patient, climate, sanitation, neglect, and so on. Dr. Nicholls says that many evolving papules abort, mostly as the disease is declining, and then both small papules and scaly patches may be seen. In favorable cases the eruption shrivels away, and the crusts dry up and become detached in a week or ten days (Nicholls), leaving a macule of variable duration. In unfavorable cases ulceration of varying degrees of severity may set in. The eruption evolves in successive crops, and Dr. Nicholls, in Dominica, finds that the disease lasts from one to sixteen months, but cases have been known to last several years. The eruption is usually discrete, but sometimes becomes confluent or is crescentic, and may encircle the mouth or anus like condylomata, which in these situations it much resembles. The sites chiefly affected are the lower extremities, the face, the upper extremities, and then the trunk and perineum and genitals. With care, yaws should not be confounded with any other disease, although the resemblance, at first, to rupia, condylomata, and vegetating syphilides, is close in some instances.

TREATMENT.—In ordinary cases, where the general health is good, the disease runs its natural mild course under proper food and hygiene, and the prognosis is most favorable. Dr. Nicholls is of opinion that in such cases “the disease may be arrested, or its duration abridged, by the administration of certain drugs.” He recommends sulphide of calcium, or sulphur and cream of tartar until the crusts commence to fall, and then substitutes iodide of potassium. In some chronic cases arsenic is useful. In cachectic patients the first thing to do is to build up the system by good hygiene, nourishing diet, and tonic remedies. Mercury, the stock remedy hitherto, seems useless, and often is most deleterious. Locally, carbolic oil and lotion are the best remedies, with poultices to remove foul crusts. Ulcers can be dressed by the usual methods, and skin grafting is most useful. The iodide of starch paste ought to be valuable for foul ulcers.

Freckles. (*See Lentigo.*)

Furunculus, or **Furuncle**, or the **Common Boil**, is a rounded, painful, circumscribed inflammation of the skin, having its seat more or less deeply in the connective tissue. A boil begins as a red and tender, tense, rounded lump in the skin, and as it becomes more projected has an indurated and inflamed base, and slow suppuration supervenes in the central portion, which presently sloughs out and constitutes the characteristic “core.” Rarely, gangrenous inflammation may occur. If the inflammation does not go on to suppuration, the boil is called a “blind” one. The exact anatomical seat of boils probably varies, in the majority of cases it is generally about a hair or its sebaceous glands (*follicular boils*); in other cases possibly about a sweat coil (*see Hydro-adentis*); and in others again in the connective tissue, and apart from any gland (*cellular*

tissue boils). Boils are mostly found on the back of the neck, the buttocks, and the limbs, and they may occur in considerable numbers, and one after the other over a long period of time. They occur in those whose vitality is depressed by defective or depraved living, or by constitutional causes, such as scrofula; and again in those whose blood current is charged with imperfectly assimilated nitrogenous material or with waste products, and particularly in diabetics. In such subjects, the inflammation often originates in the congestion or blocking up of a duct or gland. Further, local irritants may excite their formation, and they may accompany diseases in which scratching is freely practised—*e. g.*, scabies, phthiriasis, eczema, and prurigo. Lastly, boils apparently may be epidemic, often at the same time as erysipelas, and doubtless from the prevalence of some common deteriorating influence. They have been attributed to impure drinking-water. For Delhi boil, Aleppo boil, Algerian boil, etc., see *Ulcus orientalis*.

TREATMENT.—We must carefully unravel the underlying cause, and seek out how far deficient assimilation, excretion, or improper alimentation is at fault, or whether the boils are due to mere debility. In some cases accordingly the digestion needs helping by pepsin, or putting right by antacids and bitters or the mineral acids, or the liver must be stimulated and the system unloaded, or excretion aided. Afterwards, or from the first in many cases, a careful course of aperient ferruginous tonics, cod-liver oil, arsenic, red wines, or stout, will be necessary. Locally, we may endeavor to abort the inflammation by painting on collodion, tincture of iodine, perchloride of iron, glycerine of belladonna, and so on, or by adjusted thick, soft plaster spread with emplast. opii; but should these means prove unsuccessful it is well to poultice thoroughly and relieve pain and hasten maturation. Boils should always be pro-

tected from rubbing, and this is easily done by applying a covering something like a corn plaster.

Gangrene of the Skin.—We shall not describe here the diffuse gangrene of the extremities, etc., described in surgical works, in which the skin is involved with the rest of the tissues, nor do more than allude to the rare cases of circumscribed gangrene supervening in cachectic subjects, especially children, in the course of various eruptions or inflammations—*e. g.*, vaccination, ecthyma, pemphigus (*P. gangrænosa vel rupia escharotica*), varicella (*V. gangrænosa*), or herpes (*H. gangrænosa*). Superficial gangrenous patches are said to occur also about the extremities in that rare vascular affection known as Renault's disease. But there is a rare and remarkable idiopathic affection, characterized by tolerable symmetry, and the successive eruption of circumscribed, isolated, and superficial patches, occurring sometimes in cachectic subjects, but generally in girls who present no other clue to its cause than perhaps a neurotic history. The patches range in size up to that of the palm of the hand, are often widely distributed, and may occur anywhere. The patches in this affection, which has been variously called *Erythema gangrænosum*, *Dermatitis gangrænosa*, etc., commence by pricking and tingling sensations, and the successive formation of either purpuric or erythematous, more or less rounded areas, which become anaesthetic. In the centre of this area the skin becomes mummified, or the seat of a dirty greenish slough, and this may be preceded or not by a more or less perfect bulla. When the dead skin separates an ulcerated surface is disclosed, and a cicatrix forms and sensation returns. Patch may succeed patch in this way for months, and the degree of inflammation may vary from an erythema and a bulla to severe gangrene. In any given case, however, the degree of inflammation is fairly constant. Malingering

should be carefully excluded in making the diagnosis, but there is much difference of opinion as to the genuine character of any of these cases. (*See Feigned Diseases.*)

TREATMENT.—Those who consider this affection genuine find it very intractable to internal drug treatment, and the best course seems to be to build up the health in every way, by cod-liver oil, tonics, arsenic, residence at the seaside, and so on. Locally, the sloughs should be removed by poultices, and the sores usually heal readily under the ordinary dressings.

Grocer's "Itch" is a dermatitis caused by the irritant action of sugar about the hands. (*See Dermatitis.*)

Guinea or Medina Worm Disease is an endemic disease on the central part of the west coast of Africa, about the Red Sea and Persian Gulf, some parts of Western Asia, many parts of India, Southern China, and some East Indian Isles, and it is of exceptional occurrence in this country as an importation. It is capricious in its distribution, and variable from year to year even in the above countries. It has been made out that the perfect larvæ enter the human stomach in drinking-water, and the impregnated females find their way (the adult males are unknown) to the subcutaneous tissues, where they develop for twelve to fifteen months without causing any noticeable ill-effects, till they attain a length of from six to forty-eight inches or more, and come to resemble a piece of stout white whipecord. When the time of their maturity and approaching death arrives, they get restless and seek to escape into another medium to discharge their innumerable young. The latter are found in fresh water as parasites in certain Entomostraca (*cyclops*). There is nothing special about the fresh water in which they may be found, but it has been noticed in India that cases present themselves increas-

ingly with the hot season, reach their maximum number in July and August, and decline with the monsoon. The symptoms arise when the worm grows restless and seeks to escape, and there are violent itching and pricking, pain, stiffness, and a boil-like or bullous inflammation at the spot where the worm pierces the skin. The site of exit is in ninety-nine per cent. in the lower extremities, and the foot and ankle are specially selected, but the worm may issue from the scrotum, back, or elsewhere.

TREATMENT.—The most approved method is to secure the head to a quill with thread, and several times daily with the gentlest traction gradually wind out the worm on the quill, the parts meanwhile being kept moist by poultices of glycerine and water applications. If the worm is not firmly secured, it recedes and migrates about the body. Assafœtida is recommended for internal administration.

Gutta rosacea, or Rosacea. (*See Acne rosacea.*)

Hæmatidrosis (*Ephidrosis cruenta, Sudor cruentus*), or the “bloody sweat,” consists in the escape of blood corpuscles on the surface of the body with the sweat, without breach of continuity of the skin, and it is undoubtedly of very rare occurrence, though well-authenticated cases are on record. It should be distinguished probably from the class of cases due to vicarious menstruation, where blood exudes from the surface of erythematous areas of skin. Hæmatidrosis is often associated with profound nervous derangement or prostration.

Hair, Diseases of the.—We have alluded in other places to the structural diseases of the hair caused by the trichophyton fungus, that brought about in alopecia areata, trichorexis nodosa, and fragilitas crinium (*see the latter*). It is necessary to mention further the falling and atrophy

of the hair in such cachectic states as syphilis and new growths (*lupus*), and inflammations (*seborrhœa*, *eczema*). Another curious condition (Wilson's *Leptothrrix*) is one mostly found on the axillary and pubic hairs, but also beneath the nostrils. Here the cuticle flakes off, and a few fibres fray out, perhaps the whole length of the hair, perhaps only here and there. These fraying collect fatty and other foreign matter, and in this a minute fungus develops.

Herpes is a non-contagious disease, characterized by the eruption of vesicles, as a rule rather larger than those of *eczema*, mostly arranged in one or more clusters on erythematous bases, of the size of a sixpence to a five-shilling piece. This eruption runs a very definite course of from one to two or three weeks, and the clear contents of the vesicles become cloudy, and, if uninjured, the walls shrivel and finally subside to form a thin flake. The vesicles are formed by the exudation of serum and leucocytes into the papillary layer and rete mucosum, and its encasement in loculi formed by the stretched-out rete cells. Herpes may be subdivided into two groups, viz., *Herpes facialis et progenitalis* and *H. zoster*.

Herpes facialis, which is very common, occurs on the face. All are familiar with the outbreak of one or more clusters of vesicles on the lips (*H. labialis*), which recurs over and over again, with every little derangement of the health apparently; but more rarely the eruption is more widespread, and extends over the cheeks, on to the ears, or even to the buccal mucous membrane, the pharynx, and inside of the nose. This form occurs in connection with pneumonia, catarrhs of the air-passages, the crises of fevers, etc., and hence is said to be *symptomatic*. It is probably due to reflex nervous action following these special shocks to the nervous system.

Herpes progenitalis is a very closely allied phase, and consists in the evolution of a little group of vesicles about the prepuce, or some other part of the penis, or on the external genitals of the female, in whom, however, it is but rarely observed. From the nature of the site on the prepuce or glands, the vesicles have an imperfect and ephemeral existence, as in the mouth, and only a number of little erosions are usually observed, which quickly heal, but may be mistaken for chancroids. There is a similar tendency to recurrence, and a similar predilection to occur in young adults, though it may occur at any age, as in *H. labialis*. The eruption is supposed to be excited in certain neuropathic subjects by acid states of the system, by worms, by dyspepsia, etc., and such causes must be rectified to prevent its recurrence.

Herpes zoster, Zona, or Shingles, differs from the foregoing in that it only exceptionally occurs more than once in the same subject, and the eruption is distributed in marked relation to the course of cutaneous nerves, and is by other symptoms demonstrated as dependent on a nerve lesion. The type of this phase occurs as groups of vesicles clustered on erythematous bases, arranged in the course of the terminal twigs of the intercostal nerves, and forming a semi-girdle round the trunk. This eruption may, however, occur in the course of any cutaneous nerve, and striking instances are afforded in its not uncommon outbreak over the distribution of the first division of the fifth nerve (*H. zoster ophthalmicus vel frontalis*), when it covers the forehead and part of the scalp in a fan-like arrangement, and is associated often with conjunctivitis, keratitis, iritis, etc.; or, again, more rarely over the distribution of the second and third dorsal nerves and their intercosto-humeral branch, or down the leg. Besides the frequent occurrence of neuralgia before or after the eruption, hyperæsthesia, anaesthesia,

paresis, amyotrophy, etc., sometimes exist. It has been recorded on very rare occasions, in the course of cerebral lesions, and rather more frequently in cord lesions, as myelitis and locomotor ataxia, but most commonly it is of peripheral origin, either arising spontaneously, apparently from general gouty or rheumatic conditions or local inflammation, or it is asserted during the exhibition of arsenic, or apparently from reflex action following injury to some nerve in another part, or from pressure or irritation of a nerve by an aneurism, tumor, or carious vertebra. Pathologically, its neurotic origin has been demonstrated in several cases by the proof, *post-mortem*, of congestion and neuritis, sometimes in the ganglia, sometimes in the periphery of the nerve beyond the spinal ganglia, and also in the posterior spinal roots. In Herpes zoster the clusters of eruption come out successively over one or two days, and run a very definite course of from two to four weeks. Chronic herpes is a curiosity, and is due to an irritable scar or some other persisting irritation. It is rare for more than one nerve to be affected at the same time (except one or two adjoining each other on the same side). It occurs equally on either side, and is said to be more frequent in spring and autumn. It is met with at all ages, and is often associated with marked constitutional disturbance, and in elderly people, followed by much exhaustion.

It is necessary to be aware also of the fact that the term *General Herpes* has been applied to some rare widespread and mostly acute eruptions of large vesicles or small bullæ, though their exact relation to Herpes zoster and pemphigus is as yet ill-defined.

TREATMENT.—As a rule, all that is necessary to be done is to soothe any irritation, or dry up any fluid by the dusting on of powders (F. 90, *et seq.*), or the use of bland salves or lotions (F. 20, 40, 47, 86, 84, 85, and 83), whilst the eruption is protected by a covering of thick muslin or

cotton-wool. If much pain is present whilst the eruption is out, such applications as *amyl colloid* (F. 34), painted on, may be of service, or opiates on spongiopiline, or belladonna fomentations (gr. xx of the extract to aq. ȝij), or poultices, whilst if the neuralgia persists, sedative hypodermatic injections may be necessary. Internally, it is necessary to carefully counteract any febrile, dyspeptic, rheumatic, or gouty conditions, and to support the general health by red wine, bark, etc., where necessary. Some physicians try to cut short the eruption by phosphide of zinc, etc.

Herpes iris (Willan and Bateman) is a rare and striking affection which, though called a herpes, has the closest relation with the ringed and papulate forms of erythema multiforme; indeed, it is regarded by some as only an outlying member of the E. multiforme group. The affection occurs in weakly subjects, runs a course of two to four weeks, and is mostly ushered in and accompanied by some malaise. The eruptive lesions come out in several crops, and begin as erythematous papules, the size of split peas, isolated and situated about the hands, especially the backs, or in addition about the forearms, knees, and insteps, and, as the exception, many may remain at the papular stage. Generally, however, the papule becomes capped with fluid, and as the inflammation extends to a very limited extent, the central cap may become surrounded by a secondary ring of vesicles, or rarely by a second and a third ring, one within the other, the whole soon displaying the rainbow tints, whence the affection derives its name. The lesions may coalesce, the contents may become purulent, crusting ensues, and scars are often left. The affection occurs in young people mostly, and, like erythema multiforme, is symmetrical, and tends to recur. There may be itching and burning, but no marked distribution along the course

of the cutaneous nerves, nor is there any neuralgic pain. The eruption is, however, frequently associated with *Herpes facialis*, which may extensively implicate the buccal and nasal mucous membranes, and rarely with *Herpes pro-genitalis*.

TREATMENT.—In the early stages, a soothing lotion (22, 83) or dusting powder (90, *et seq.*) may be applied, but later the contents of vesicles should be let out, and where crusts form they must be bathed off, and a simple healing or slightly astringent salve applied (F. 20, 25, 40, 42, 84, 85, 86). Internally, the general treatment must be directed, in the first instance, against any dyspeptic or rheumatic symptoms, and the building up of the general health by tonics must be attended to in order to prevent recurrence.

Hydroa is an old term which had fallen into disuse until Bazin revived it to denote certain rare vesicular eruptions, one variety of which (*H. vesiculeux*) he afterwards acknowledged to be the *Herpes iris* of Willan and Bateman. However, the name is still applied by some to a heterogenous group of rare or anomalous vesicular or bullous eruptions, which would rather seem to fall under vesicating erythema multiforme, herpes iris, or pemphigus. (See also General Herpes.)

Hydro-adenitis is a term which has been applied to furunculoid swellings which are supposed to arise in an inflammation of the sweat glands. They occur chiefly in very hot weather, and especially about the axillæ. Perhaps many of the boils so common in the tropics are of this nature. They may be treated like boils.

Hyperidrosis, or the state in which sweating is profuse, or too easily excited, is met with under a variety of circumstances. Thus, it may occur during both heightened

and lowered vascular tension, and be caused by emotions, by external heat—*e. g.*, tropics and Turkish bath, by dia-phoretics, and by perverted innervation, as in the vasomotor paralysis of the sweating stage of ague, etc. The influence of the nervous system, indeed, over the occurrence of sweating is very marked. It is seen in the course of some fevers—*e. g.*, rheumatism, and marks the crises of others. The sweats of pyæmia, of phthisis, cancer, and other debilitating affections are familiar to most. Besides these general sweats, we meet also with abnormal local sweatings. Such not infrequently accompany various paralyses and interferences with the functions of the nerves. We have here to deal, however, with the annoying general sweating arising from debility, possibly succeeding a fever, and more particularly with the local sweatings of the palms or soles, axillæ, or genital regions, which cause so much annoyance, first, because much discomfort may arise from the saturation of the clothes and the chill produced; secondly, because the sweat decomposes and excites a dermatitis; and thirdly, because such acrid sweat develops a most unbearable odor. (*See Bromidrosis.*)

TREATMENT.—We have only to deal here with the general or local sweatings arising apart from markedly diseased states. These are generally associated with more or less debility, and must be met by the exhibition of tonics, especially the mineral acids, strychnia, etc. Locally, extreme cleanliness should be exercised, and the parts (if not much inflamed) washed once or twice daily with carbolic or thymol soap. The hypersecretion may be often much arrested by the use of belladonna liniment rubbed into the part, or the free application to the parts and in the socks of astringent and absorbent powders, such as tannin and alum with starch, to which antiseptics may be added to prevent decomposition (F. 90, *et seq.*). Any dermatitis excited is to be treated like an eczema, and besides the

dusting powders just mentioned, antiseptic and drying lotions are useful (F. 83, with salicylic acid), and if the corium is much exposed, astringent and bland salves (F. 20, 25, 78B, 86).

Hypertrichosis signifies an excessive growth of hair either upon regions where hair usually grows or on other parts. The congenital hairy mole, or *naevus pilosus*, is an example, which is usually associated with extreme development of pigment, and often papillary hypertrophy. Tubercular children, as is well known, may acquire a notable growth of hair on the trunk and limbs. In some persons, again, it has but little significance. But apart from this, the normally hairy parts and the body and limbs generally may become thickly coated with hair, and to a very extraordinary extent sometimes. Thus, in books on the hair, portraits may be noticed of bearded women, and people covered with hair like a gorilla.

TREATMENT.—No one line of treatment can be laid down. Hairy naevi may sometimes be destroyed by the cautery or be excised, or they may be kept shaved, and the mark partially hidden by powder, or depilatories (F. 102) may be used, or epilation in slight cases practised frequently. After the latter methods, however, the hair constantly tends to grow again. Recently, the method of destroying the hair papillæ one by one by an electrolytic needle, has met with increasing favor.

Ichthyosis is a disease of the skin which presents a wide diversity of appearances. It gradually develops in tender infancy, or is more rarely actually congenital ; it affects the whole of the body usually ; it persists through life, and is incurable ; is often hereditary, and is characterized by certain structural and functional defects which vary in different cases. The very mildest form is that in

which the external aspect of the arms or thighs is studded with a multitude of miliary prominences, due to the plugging of the follicles by exuviae, and this gives to the surface a rough and rasp-like aspect and feel. This condition should not be confounded with follicular plugging acquired from uncleanliness, nor with the lichen pilaris of strumous children. The plugs sometimes project markedly from the follicles as little spines. A mild and very common form, known as *Xeroderma*, is the condition in which the skin universally is dirty looking, harsh and rough, dry, shiny, and tense in some parts, and crinkled or covered with branny scales elsewhere. This condition is worse in winter than summer, and is liable to become inflamed, and the weeping, raw surface may mask the primary disease and closely simulate eczema. Between this xeroderma, in which the sebaceous, if not the sweat, flow is more or less arrested, and the extreme forms of ichthyosis, endless links present themselves. First, we see an exaggerated form of xeroderma in which the skin is somewhat thickened, and a parchment or mother-of-pearl aspect is presented (*I. nacrée vel nitida*). Then, in other cases, as the skin is increasingly thickened, the natural lines and furrows become more and more exaggerated and deeper, marking the surface off into lozenge-shaped areas, and the scales show a disposition to adhere only by their centres (*I. simplex*). With the papillary hypertrophy, also, and the accumulation of epithelium, much sebum gets mixed up in some cases, so that large, dirty, mud-like masses cake on the skin and become more or less adherent, being divided up by deep fissures, as is often well seen over the front of the knees. Lastly, these masses may project as large spines and lumps, to which extreme forms the terms *I. cornea vel hystrix vel hystricimus* have been applied. Such cases are often associated with marked mental and physical deficiency. All kinds of fanciful resemblances have been

suggested, as set forth in the terms "man-fish," "fish-skin disease," "porcupine-man," and "serpent-skin." This diseased condition of skin persists generally through life, and up to puberty it may get worse and worse, the masses being continually shed and removed. Occasionally ichthyosis is localized, and then, as also in some cases of general distribution, the diseased areas may be arranged in lines or bands. New ichthyotic areas may be seen gradually to develop during childhood. In the general cases there is a marked tendency for certain parts to escape—*e. g.*, the flexures of the joints, the genitals, the face, and the palms and soles. Lastly, ichthyosis is met with in different degrees of intensity on different parts of one and the same patient.

Ichthyosis can only rarely be confounded with other affections, such as a simple, harsh, ill-nourished skin, and one thickened by chronic, dry, and nearly universal eczema. The localized forms should be distinguished from congenital warty bands, and a word of caution is necessary with regard to a very rare form of seborrhœa, simulating *I. cornea*.

TREATMENT.—Though incurable, great amelioration can be effected. In the milder forms, the skin should be kept systematically softened, especially in winter, with glycerine and water, or glycerine of starch. In the more exaggerated forms, two procedures are necessary, one to remove the hypertrophied masses by prolonged and incessant bathing and washing; and this having been effected, to prevent their reaccumulation by a continuance of the same methods, or by oil or glycerine inunctions, or by applications, such as tar (F. 73), to check the cell-growth. Alkaline baths are the most useful for getting off the plates; but sometimes a stronger alkaline lotion, kept in prolonged contact with the skin under oil silk, is necessary to get off specially obstinate masses.

Impetigo, as distinguished from Porrigo, is an old and almost disused term, causing much confusion to the student. It was formerly applied to a non-contagious eruption of the scalp, composed of small, slightly raised pustules, pierced or not by hairs, with very little surrounding inflammation and red base, very quickly maturing, discharging, and crusting, occurring singly, but mostly in groups, and situated chiefly on the scalp of children, and the face of adults, but seen also on the trunk and limbs. The majority of these cases were undoubtedly phases of *pustular eczema*. Later, a contagious *Impetigo capitis*, due to lice, was recognized (see Phthiriasis), and now a-days at Blackfriars Hospital there is described an *Impetigo vel porrigo contagiosa*, distinguished from eczema by the character of the discharge and crusts, occurring as flat vesico-pustules about the scalp, face, and hands, and drying into yellow friable crusts. It may originate, Mr. Hutchinson says, from any cause which induces formation of pus—*e. g.*, lice, the suppuration under the scab left by vaccination, etc. This pus is inoculable, and is contagious to different parts of the skin of the same patient and others. The term Impetigo, therefore, as now used, is applied both to pustular eczema by some, and to the pustular dermatitis set up by irritants, especially by lice about the head. (*See Phthiriasis capitis.*)

Impetigo contagiosa is an affection described by Tilbury Fox as quite distinct from the Porrigo contagiosa of the Blackfriars surgeons. It is not yet universally recognized as a distinct disease. The eruption occurs chiefly about the face, but may extend to the hands, head, to the mucous membranes and conjunctivæ, and rarely to the body, and children only are attacked with rare exceptions. The affection is often ushered in by more or less malaise and pyrexia, usually, however, of a very slight character, and the eruption commences as discrete vesicles,

or tiny flattened bullæ, which extend peripherally (*unlike an eczema vesicle or pustule*) to cover the area of a split pea, or a threepenny bit, if not broken. As they grow, the clear contents become clouded and then purulent, and finally dry into yellowish crusts, which look as if they were "stuck on." Each vesico-pustule lasts nearly ten days, and as all do not evolve simultaneously, the affection may persist for several weeks. The lesions are discrete and not crowded on a common infiltrated base, but when closely set the crusts become confluent and disguise the typical character of the eruption; only in this case can it well be confounded with eczema. This affection is now and then epidemic in schools, streets, or houses, but is mostly sporadic, and it is not of very common occurrence.

The inoculability and contagiousness have been ascribed to the presence of low vegetable organisms found in the contents of the vesico-pustules or in the scabs, but this is a debatable matter as yet. The great point in the *diagnosis* is to distinguish it from the very common pustular eruptions set up about the faces of unhealthy children by the inoculation of pus from such sources as eczema impetigo-nodes of the scalp, the pustular dermatitis of the poll due to pediculi, festers from scratches, purulent otorrhœa and nasal catarrh, vaccination pustules, etc.

TREATMENT.—The lesions are very superficial, and locally all that it is necessary to do is remove the scabs by oily applications, poultices, or bathing, and then apply, night and morning, a weak ammoniated mercury ointment (gr. v to vaseline $\frac{3}{4}$). In this respect it contrasts strongly with true eczema. In strumous subjects there may be slight ulcerations.

Intertrigo, called also **Erythema intertrigo** and **Eczema intertrigo**. (*See Dermatitis.*)

Itch, Army Itch, Malabar Itch. (*See Scabies.*)

Keloid, or Kelis (Alibert's Keloid), is a new growth of the connective tissue of the skin, or probably always of scar-tissue, commencing as small nodules, or thickenings of preëxisting scar-tissue, and increasing to form hard, dense, elevated, glossy, either circumscribed, rounded, or oval tumors or bands, or trabeculated flattened masses of most irregular size and shape. From the raised body of the growth fibrous bands, brought into prominence by the contractility of the mass, commonly radiate into the surrounding tissue, and hence the term *Keloid*, from a fanciful resemblance to a crab's claw. The color varies from a pink to a darker red, or even livid hue, and rarely there may be more or less dark pigmentation. Occasionally uncomfortable sensations are experienced, or even pain, especially on pressure. They usually have a very chronic growth, and after a time may remain stationary for the rest of life, but not uncommonly, especially in the young, they get softer and more elastic and gradually disappear; still the prognosis in this respect is not very satisfactory. Keloid occurs in both sexes, and, as for age, most commonly in early or middle life. The shoulders and sternal region are favorite sites, but the growths may be seen anywhere on the skin. Commonly they occur singly, sometimes there are two or three distinct masses, and occasionally they are very extensively distributed, and more or less symmetrically placed. It is usual to describe two varieties—the *true, spontaneous, or idiopathic keloid*, which arises from the previously healthy corium perhaps after some irritation, and the *false or traumatic, or the keloid of cicatrices*. It is probable, however, that the hypertrophic outgrowth never arises otherwise than in a preëxisting cicatrix, such as results from vaccination, acne, smallpox, varicella, syphilis, burns, ear-borings, floggings, etc. Still it is well known that the members of particular families are specially predisposed to keloid, and that dark-skinned races are more subject to its occurrence.

than the fair-skinned. The tumors consist of densely felted connective tissue, with a varying but small proportion of cell infiltration in the different cases about the vessels, and these growths can hardly be confounded with any other disease. Dr. Liveing insists on the structural and other differences between *cicatricial keloid* and a *hypertrophied scar*, though it is confessedly difficult in many cases to distinguish the two by the unaided eye. The dense and but little vascular keloid tissue grows up in the looser and more vascular scar-tissue, and, unlike simple hypertrophy of the latter, pushes it aside and invades the healthy corium around.

TREATMENT.—The treatment is unsatisfactory. If removed by knife or destroyed by caustics, keloid tends to recur again and again. Injections of iodine, caustic potash, etc., usually prove futile, so that we are reduced to relieving any severe pain, which on rare occasions may be present, by hypodermatic sedative injections and protecting the surface. If external resolvents are tried, care must be taken not to set up irritation. Internally, such medicines as iodide of potassium seem without effect.

Lentigines are due to an excessive deposit of pigment in the lower layers of the rete, and take the form of yellow, brown, or black spots, and patches of various shades of color and of different sizes, but mostly of round or oval contour. *Freckles* or *Ephelides* are of two kinds, viz., "summer freckles," which are excited by the sun in light-complexioned persons, and which disappear in winter, and "cold freckles," which are not confined to fair-skinned people, are not excited by the sun, and do not disappear in winter. "Liver spots" occur usually as larger patches of pigmentation, and are popularly supposed to be caused by liver derangement. They are often not permanent, and

certainly sometimes seem due to functional disturbance of the chylopoietic system.

TREATMENT.—The disappearance of these pigmentations is best hastened by the application of bichloride of mercury lotions (F. 56), of strengths suited to the particular skin.

Lepra is an old term for Psoriasis, with especial reference to the chronic ringed forms, and in this connection it has now very properly fallen into disuse. The term **Lepra** is now reserved for *true leprosy*.

Lepra arabum, Elephantiasis græcorum, True Leprosy, has a very extensive, and to some extent shifting geographical distribution, and is still found on every continent and many islands, but wherever seen it presents the same features. In leprosy-infected countries the distribution of the disease is not equable and uniform, but it will be prevalent in one district or village or town and perhaps absent in the immediate neighborhood, though apparently similar conditions exist. It does not appear to be limited by any condition of soil or climate, though it exists mostly in the tropics and in the plains; yet it certainly flourishes notably by many seabards and in the vicinity of water, although not universally so, and on this fact, mainly, has been founded the idea of its causation by indulgence in a putrid or wholly fish diet. In the Western Hemisphere it is found dotted about or in little centres; among other places in New Brunswick, Cape de Breton Island, California, Oregon, and the States where it has been introduced chiefly by settlers, Chinese, Norwegian, and French. It is also met with in the Southern States, Mexico, the hotter parts of South America, the Sandwich Isles, and the West Indies. It attacks all races and ranks of life, and both sexes. No age is exempt, but it commonly appears about

puberty; infantile cases occur, though it is still a question whether leprosy is ever congenital. The exact cause of leprosy, and whether it can arise *de novo*, are for the present unravelled points, *i.e.*, whether it arises from restriction to, or excess of, any special food, or from climatic or malarial influences, or certain habits of life, or some special virus. Recent researches indeed prove that a peculiar bacterium (*Bacillus lepræ*) is invariably present in the special lesion, and hence leprosy is possibly provoked and communicated by this bacterium. Whether, again, it is propagated by heredity or contagion, or both, are keenly debated points. If hereditary, it mostly descends in collateral lines, and tends to skip several generations; and, as for contagion, the tendency of the best opinions is now towards the view that leprosy is contagious under certain conditions, such as the inoculation of the special discharges. Leprosy is one of the most fatal diseases, but chiefly so on account of its complications, such as tuberculosis, albuminoid and Bright's disease, ulceration of the bowels, exhaustion from discharges, etc.

Leprosy is a chronic and essentially symmetrical disease, characterized by the development of a small-cell growth, like that of lupus and syphilis, in various tissues of the body, but especially affecting the skin, and in three chief forms—viz., first, an eruption of an erythematous type, which is more or less anaesthetic; secondly, a deposit around, causing compression and neuritis of, the cutaneous nerves and superficially placed nerve trunks, inducing widespread anaesthesia and severe trophic disturbances of a special character in the extremities; and, thirdly, a more copious form of deposit, either diffused and infiltrated and appearing as tumefaction, especially about the face, or more localized, and taking the form of an eruption of nodules or the so-called “tubercles.” This new growth may affect secondarily the mucous membranes leading

from the mouth and nose, and, to a far slighter extent than the skin, the liver, spleen, and testes. Leprosy, after its inoculation or whatever the method of contraction, may be latent in the system for from two to fourteen years, which is explicable either on the theory that the hereditary taint requires special circumstances to develop it, or that the acquired poison, like that of hydrophobia, has a very long and variable incubation period. Premonitory symptoms of variable duration and ill-defined character have been generally described, many of them being referrible to the dyspeptic class. Pathognomonic drowsiness and profuse sweatings are characteristic of tuberculated leprosy, and the special primary eruption of non-tuberculated leprosy is said to be preceded by pathognomonic pains in the superficial nerves and loss of coördinated and grasping power.

Two chief *clinical* types have by general consent been marked out—viz., the milder *anæsthetic* or *non-tuberculated* form, and the more severe *nodular* or *tuberculated leprosy*. Some affirm that these two types frequently run a distinct course throughout, whilst others hold that though this is true of the first variety, advanced cases of tuberculated leprosy are rarely seen uncomplicated by anæsthesia (the so-called *mixed* cases). A third type has also been described (*macular* or *spotted leprosy*), but with doubtful expediency, as all cases of leprosy would appear to commence by an eruption.

Anæsthetic, or Non-tuberculated, Leprosy has an insidious onset, and attention may be first attracted either by lancinating or other neuralgic pains in the extremities, or by muscular incoördination in the hands, or by an erythematous eruption of a special character, or by anæsthesia of the extremities and contraction of the little finger. This eruption, which is very constant, consists of erythematous spots or macules, one or two inches in diam-

eter, of an oval or circular shape, fairly well defined, not raised, nor *at first* anaesthetic, of a pale reddish bronze, light tawny, or *café-au-lait* tint in fair-skinned people, and of a bright yellow color in blacks; the skin of the macules is harsh, dry, non-perspiring from gradual atrophy of the sweat-glands, without furrows, and showing atrophy of the hairs; situated mostly about the back, shoulders, nates, and the posterior aspect of the limbs. Patches may come and go without fever for one or two years, and after that time spread serpiginously and coalesce, covering large tracts of the body as well as the limbs with discolorations, which last throughout the course of the disease. (*See the diagnosis of Leucoderma.*) Many of the spreading patches atrophy, or clear up in the centre, leaving an active raised edge. Characteristic anaesthesia develops in the patches, but is not confined to them. Coincidently with these changes the neoplasm collects round the superficial nerves, beginning with the ulnar, median, radial, musculo-spiral, posterior tibial, etc., and these may be felt to be thickened in certain situations. Their functions are interfered with by the compression and neuritis set up, and anaesthesia results over the areas corresponding to the peripheral terminations of the bundles of nerves implicated, and this anaesthesia is ever on the increase superficially and in depth as the disease progresses. The muscles of the hands atrophy, and the contraction of the little and ring fingers is one of the earliest symptoms. As the interossei, etc., waste, the hands assume gradually the characteristic bird-claw aspect. Injuries to the anaesthetic parts pass unnoticed by the patient. Important trophic troubles also ensue, which result in interstitial absorption, necrosis, and caries of the phalanges, and extensive ulcerations. After some years, some muscular paralysis also supervenes—*e. g.*, of the third nerves. The disease seems to progress for about ten years, and then to remain stationary or gradually die out.

Tuberculated Leprosy declares itself first by the outbreak on the *face* commonly of one or more hyperæsthetic, raised, thickened, erythematous, rounded patches, in size varying in diameter from one to several inches, and in color reddish or reddish-brown in the black, and a deep, dull red, livid, or mahogany in the fair-skinned. These patches begin as a mere blush, and gradually get raised and thickened by the new growth. They may come and go for some months, and their evolution is attended by febrile reaction. After a time they disappear altogether, and the course of the disease is henceforth marked by the repeated outbreak of "tubercles" or nodules of new growth, varying in size from a pea to a hen's egg, isolated or grouped, and more or less widely distributed. Their color varies, for in the fair-skinned they are pinkish at first and gradually get livid and deeply pigmented, and in the black they are pale colored at first. They last a variable time, and finally either become absorbed or atrophy, or they suppurate or ulcerate. The latter process may be very extensive, and the draining discharges form one of the worst complications of leprosy. More or less fever attends the absorption and deposition of leprous material, and the related glands, especially the femoral, get much enlarged and obstruct the flow of lymph. Thus the profuse discharges, the febrile paroxysms, and the interference with the lymph circulation, are the main factors in exhausting the patient. The chief sites for these "tubercles" are the head, face, and the ears, the extremities, mammae, and about the genitals. They are rarely seen on the back, the neck, and the palms and soles, and never on the hairy scalp. The lining membrane of the nose is frequently affected, also the throat, giving rise to the leper's peculiar croaking voice, and tubercles are often seen in the mouth and pharynx, and on the cornea and conjunctiva. The face is very early affected, and becomes thickened, swollen in folds, and studded with

tubercles. The lips become everted, the ears thicken and stand away from the head, the eyebrow hairs fall out, and a peculiarly ferocious or aged aspect is simulated. The new growth is also found in the liver, spleen, and testes, and in the latter situation interferes with the virile power. In pure tuberculated leprosy there is not the mutilation of joints seen in the anaesthetic variety. The average duration of anaesthetic leprosy is about fifteen years; of tuberculated, eight years. The new growth is possessed of special characteristics which distinguish it from that of syphilis and lupus—*i. e.*, the effused small round cells undergo peculiar degenerative changes, ending in the production of branched and irregularly shaped cells, and some special elements.

Those acquainted with the affection can hardly confound it with any other disease. It is, however, frequently mistaken, before anaesthesia or trophic changes ensue, for syphilis. Leucoderma and ringworm in the dark-skinned are perhaps most likely to be confounded with the macular forms.

TREATMENT.—Lepers greatly improve if they are removed from their usually filthy and poverty-stricken surroundings, and subjected to the influences of generous and fresh diet, personal cleanliness, and proper hygiene. There is no known remedy which will “cure” or eradicate leprosy, but the indications are to support the general health in every way by tonics and healthy living, whilst the excretory organs are kept active, and at the same time to keep the skin free from leprous deposit by local stimulant or resolvent applications, such as carbolic oil. Of late years several oils—*e. g.*, the cashew, gurgun, and chaulmoogra oils, with nourishing and alterative, laxative and diuretic, and stimulant properties, have come very largely into use, and the effects obtained from their use *externally* and *internally*

(F. 35, 148, 149) are more satisfactory than from any other drug treatment.

Leucoderma, or **Vitiligo**, or **Leucopathia**, is an acquired non-hereditary affection of the skin, occurring mostly in brunettes and in persons of a spare habit, characterized by the formation of rounded or oval, blanched, sharply circumscribed patches with a convex border, which constantly tend to enlarge and coalesce to form irregular areas, and which are surrounded with a concave border of increased pigmentation, fading off into the surrounding skin. As a fact, this hyper-pigmented bordering varies much in degree in different cases, for though at times it is conspicuous, and indeed forms the leading feature, so that melasma is closely simulated, in other cases it is hardly recognizable. Still the affection seems to comprise essentially the double process, and not to be simply a pigment atrophy. Not infrequently it would appear to commence in hyper-pigmentation. Further, the surface of the patches is smooth, not scaly, and structurally unaltered, and its functions generally normal,¹ and its sensibility intact, thus distinguishing the affection from any patches of morphea or leprosy, which may superficially resemble it. The affection is often very fairly symmetrical; and when numerous the patches may coalesce until large tracts are involved. It occurs at any age, except perhaps in infancy; in either sex, but oftener in females; and both dark- and fair-skinned races are subject to it, though the former are more especially prone. The sites mostly favored are the genitals, mons veneris, extremities, especially the backs of the hands and forearms, and the head and face. When hairy regions are involved, the hairs lose their pigment also. The causes

¹ Marked diminution of the sweating function has, however, been recorded as existing in some cases.

of leucoderma are still obscure, but there is a large consensus of opinion that the nervous system is at fault. Certainly it is very closely allied to *melanoderma*. In some cases the health seems little affected, and no clue is forthcoming; whilst in others there is marked debility, or there has been precedent exhausting disease. Again, it may closely follow an injury to the central nervous system or some nerve; and it has been recorded many times in special association with disturbances of innervation, in ataxics, lunatics, etc. It appears, in some cases, to be directly traceable to acute emotions. It has been noticed in association with Addison's disease, and alopecia areata. Some persons, again, acquire it each summer on the backs of their hands.

To prevent any error in the diagnosis, it is necessary to clearly make out the characteristic features of the pigmentary disturbance as described above. Where the double process of the pigmentary disturbance is obscure, and its degree slight, it is easily confounded with melanoderma, and even with that associated with Addison's disease, especially if the subject be tubercular. The diseased areas of skin in morphoea and scleroderma are sometimes much pigmented also. In the darker-skin races the resemblance of leucoderma to the discolored skin of true leprosy is often remarkably close, and no doubt presents difficulties in many cases; hence the unfortunate application of the term "white leprosy" to leucoderma. A careful search must be made in such cases for anaesthetic areas, or some other symptoms of nerve implication. Refer also to the "pigmentary syphilide."

TREATMENT.—Where leucoderma is not traceable to any distinct nervous shock, the treatment is usually that for debility and anaemia, by quinine, ferruginous and nervine tonics, and cod-liver oil. The affection in many cases tends spontaneously to pass away in a few years.

Lice. (*See Phthiriasis.*)

Lichen tropicus. (*See Miliaria.*) (For **Lichen urticatus**, *see Urticaria papulosa.*)

Lichen is a term which has been in the past applied to a heterogenous collection of eruptions presenting in common the features of pimples or papules, and consequently it embraces many forms of papular eczema, of syphilides, miliaria, tinea circinata, etc. Now-a-days, the term lichen is reserved to denote one or two very definite diseases, which have this in common—that they are throughout their course papular, but are in other respects quite distinct.

Lichen pilaris is a general term referrible to conditions of skin in which the hair-follicles are blocked up by a collection of epithelial scales and some sebaceous matter, causing the formation of little acuminate pale or reddish papules the size of millet-seeds, in the centre of which are to be detected twisted or stunted or broken-off hairs. Such papules may inflame occasionally and become acneiform. There are several phases of disease here included: First, there is the plugging of the follicles, mostly about the limbs, so commonly seen in uncleanly people. Secondly, there is the rare affection to which the term is properly applied, in which the greater part of the trunk and limbs is implicated, and rough and file-like in aspect and feel. The cause is very obscure. This condition was called *Pityriasis pilaris* by Devergie, who noticed it as a sequela of pityriasis rubra. Thirdly, we must distinguish the special plugging of the follicles sometimes seen in xeroderma (*see Ichthyosis*). Fourthly, we constantly meet with a plugging of the follicles with epithelial débris and sebum in children of a phthisical habit. It may occur in patches, or more or less generalized, and is closely related to *Lichen scrofulosorum*,

etc. Not infrequently the little plugs stand out from the surface like bristles.

TREATMENT.—This should be mechanical, and consist in repeated bathings and frictions of the parts with soaps of properly adjusted strength to soften and remove the plugs. (*See also Ichthyosis.*) Where the general health is obviously at fault, suitable internal measures may be adopted.

Lichen planus is a somewhat rare, non-contagious, non-hereditary eruptive disease, characterized by the development of discrete papules of very peculiar characters as regards, amongst other points, their color, shape, structure, tendency to aggregation, behavior, seat, chronicity, and accompanying melasmic staining. In color they are of various hues, from lilac to deep purple, and suggest to the mind purpuric extravasation, being of deepest tint on the legs. In shape they are flattened, but little raised, smooth, shiny, sharply defined, of angular outline, and they frequently, but by no means invariably, present a little umbilication in their centre, and may appear to be developed round a hair-follicle. They vary in size from one to three lines in diameter, and may be covered with slight micaceous and adherent scales; but there is not the hyper-production of scales as in psoriasis, and not the bleeding points on their removal. The papules are solid throughout, show no disposition to take on an eczematous tendency, and are formed by hypertrophy of the rete.

They are very chronic, they do not enlarge peripherally, as in psoriasis, but tend to become aggregated into *irregular and not rounded* patches and bands by the evolution of new papules amongst the old. In such areas the individuality of the central papules may be lost, and the true composition of the patch only detected at the borders. The favorite seats of the eruption are the anterior aspect of the forearms, especially just above the wrist, the waist and flanks, the

hips, and over the vastus internus about the knee. The distribution may be, however, much wider than this, though certain regions—*e. g.*, the face and scalp—are excepted. It may begin anywhere, even on the penis, but most frequently on the extremities, and its rate of evolution varies very greatly. There is a marked tendency to symmetry, and, like psoriasis and secondary syphilides, to recurrence. General opinion seems to point out that women are more commonly affected, and, unlike psoriasis, it seldom or never occurs before puberty. The only remaining points of importance to mention, are the occasional implication of the nails, and palms, and soles, and the recurrence of white spots, patches, and streaks about the tongue, and buccal mucous membrane. Lastly, itching of the papules is a marked feature of Lichen planus, though its degree varies through a wide range. In Lichen planus only quite a few papules may present themselves; but in other rarer cases large tracts of skin are covered with infiltrated, slightly scaly patches, and such cases seem to lead by gradual steps to the more general and severe form of eruption described by Hebra as **Lichen ruber**, though some still hold that this close connection of these diseases has hardly been established. This very rare diffuse form, which often evolves acutely, consists of miliary papules, and as the successive crops develop they become aggregated into very extensive sheets, and the skin becomes infiltrated and slightly scaly. The irritation is often intolerable. The affection is chronic, and the greater part of the body may be affected, including the nails. Marasmus sometimes sets in, and the case may terminate fatally. The aspect of the eruption is often more like that of a widespread miliaria rubra than Lichen planus.

The cause of this eruption is still involved in obscurity, for whilst there appears to be but little derangement of the health in many persons, there is certainly in others marked

langour and feebleness, dyspepsia, and what may be called nervous debility. Indeed, some insist that it occurs especially in people of a neurotic temperament, and that it is associated especially with a weakening of the nervous influence presiding over the vessels and nutrition. As to the diagnosis, experience teaches that Lichen planus is often confounded with psoriasis, but as it presents a manifestly different aspect and distribution to ordinary psoriasis, the eruption is put down as syphilitic psoriasis, by which incorrect term is meant a *late relapsing small papular syphilide*. The latter is often glossy, very faintly scaly, of a dull-red color, chronic, and leaves melasmic stains; but it occurs mostly about the outside of the forearm, the papules do not tend to aggregation, and are not itching. A careful study of the description given above will generally obviate any difficulty.

TREATMENT.—The treatment here recommended is not simply that of arsenic internally and tarry applications externally, though arsenic is held by some to possess a remarkable influence in this disease, but after correction of any marked dyspeptic disorder it is proper to raise the tone of the nervous system by quinine, cod-liver oil, the mineral acids, and full doses of perchloride of iron. Change of scene and air is often absolutely necessary. Externally, in the widespread cases, there is much hyperæmia; alkaline and bran and starch baths are comforting, and some of the many soothing and sedative lotions prove more or less useful (F. 14, 15, 47, 83, 90). In the more indolent and less extensive cases, tarry applications (F. 73-78) or other stimulants (16, 23, 24, 26, 31, 57, 60, 62) should be applied.

Lichen scrofulosorum is characterized by an eruption of miliary papules very similar in color to the normal skin, or pale yellow, or a dull red. The special features are, that although these papules may be more or less dis-

seminated about the trunk, and, perhaps, the upper part of the extremities, the eruption is generally limited to the trunk, and occurs in the form of small oval patches or crescents, and that there is usually a strumous family history—e. g., of enlarged glands, spinal or hip disease, phthisis, mesenteric glandular disease, caries, etc. The papules often are crowned with a little scale, and some inflame and form little acne pustules. There is usually but little itching. This is a very well marked and distinct phase of disease. It occurs in children especially, and is very rare indeed after puberty, so that it can hardly be confounded with the crescentic and annular miliary syphilide (so-called *Lichen syphiliticus*) which may closely resemble it in appearance, but extends to the limbs commonly.

TREATMENT.—If untreated, *Lichen scrofulosorum* is very chronic, but under anti-strumous dietetic and medicinal treatment, a cure is generally pretty easily effected. Cod-liver oil is, of course, the main remedy. Locally, mild stimulants may be applied (F. 31, 25, 52, 73–8).

Lipomata.—Local hypertrophies of the subcutaneous fat, forming projecting growths, may occur in an analogous manner to hypertrophies of the fibrous tissue (fibromata), and such may be single or multiple. They vary in size from a bean upwards, and sometimes occur in great numbers. They are rather softer than fibromata, painless, and lobulated. The skin over them is quite natural. Sometimes they are associated with a more diffuse development of fat in certain regions, as fibromata are with dermatolysis.

TREATMENT.—This will be similar to that for fibromata.

Lupus is a term applied at the present day to a definite disease of the skin (and some adjoining mucous membranes), clearly distinguished on the one hand from syphilis, and on the other from malignant growths. It is a non-contagious,

chronic, and probably non-hereditary affection, characterized by the formation of a new small-celled growth in the meshes of the cutis, closely resembling that of syphilis and leprosy, tending to spread peripherally, but not very deeply, by infection of neighboring cells, and finally to undergo an atrophic or destructive process ending in scarring or ulceration. Two groups of *lupus* are described: viz., *Lupus vulgaris*, or true *lupus*, and *Lupus erythematosus* of German writers, which Kaposi considers not a true *lupus*, but an inflammatory disease belonging to a different category.

Lupus vulgaris presents itself under a multitude of aspects. Its slightest form, which is especially seen in the young, consists of small rounded or irregular patches of a deep-red color, of a somewhat dry, gelatinous aspect, and very slight elevation. It is like a very chronic erythema, and it gradually spreads at its periphery, whilst it atrophies in the centre of the patch. Slight scales may clothe its surface, and occasionally there is some slight exudation of leucocytes and fluid to form a thin crust. The seats of this variety are the forehead, cheek, and nose, occasionally the scalp and ears, and on the fingers, hands, and toes it closely resembles chilblains, but the patches are persistent and faintly scar. This erythematous variety has been described as *Lupus erythematoses* by English writers, and thereby much confusion has arisen with regard to this and the *Lupus erythematosus* of German writers to be described presently. The more pronounced phases of *L. vulgaris* commence with soft, semi-transparent, grayish, glistening nodules or papules, or so-called "tubercles," which tend to become more or less aggregated and confluent and remind one strongly of the "gray granulations" of the lung. The surface is often glazed and wrinkled, and large scales may continue to separate (*L. exfoliativus*). It is

characteristic of lupus that, whilst the patch pursues its chronic spreading progress, by the evolution of fresh nodules at the periphery, the older central ones tend to *atrophy without ulceration* and to leave a scar, although nodules may recur in the cicatrices. Thus the patch may often be seen to assume a crescentic or serpiginous form (*L. serpiginosus*). Sometimes there is very marked papillary hypertrophy (*L. hypertrophicus*). Such coarse phases of lupus commonly arise about the face, less frequently on the limbs and the trunk, but may occur anywhere, as the genitals, and the patches are often widely separated, and do not tend to symmetry. But from any centre lupus may wander over extensive surfaces of the body, and spread to the eye structures and buccal and nasal mucous membranes. By the cicatrices left much inconvenience, and deformity if not inconvenience, arise—*e.g.*, the eversion of the lids, and fusion of the lips and gums. Naturally there is a great tendency to ulceration of the new growth (*L. exulcerans*, formerly called *L. exedens*, as distinguished from *L. non-exedens*, the non-ulcerating forms), and some amount is very commonly seen, and of course increases the scarring. The ulceration is covered by a crust, beneath which the base is soft and fungous, and the ulceration advances at the border *pari passu* with the new growth. Still lupus does not, as a rule, tend to extend deeply, and generally in severe cases the most that results is the formation of extensive cicatrices, and atrophy and destruction of the cartilages of the ears and nose. In rare cases, however, in some cachectic persons, phagedenic ulceration sets in, and is rapidly and profoundly destructive, especially about the face (*L. vorax* or *térèbrant*).

Lupus erythematosus, of German writers, the *L. sebaceus* or *seborrhagicus*, or *acneiform lupus* of others, certainly seems very closely allied to the *L. erythematodes*

already described. The degree of vascular congestion present at first may vary widely, for a patch of erythema or a local séborrhœa may be simulated. The characteristic feature, however, is that dilated sebaceous follicles, plugged with little ropes of epithelial débris and inspissated sebum, stud the raised spreading border of the chronic erythematous patch, whilst the centre atrophies and leaves a slight scar, the whole forming thus a disk. This variety occurs on certain selected parts of the body—*e.g.*, the face, ears, scalp, hands, genitals, and rarely on the feet. A single patch may exist alone for a long time, or several develop in rapid succession, or only at wide intervals. As the patches spread they may join together, and over the nose and cheeks they coalesce to form the so-called “butterfly-lupus.” They tend to disappear in time, leaving a delicate cicatrix. Hebra and Kaposi describe two varieties—viz., *L. erythematosus discoides*, such as we have here described, and a *L. erythematosus disseminatus et aggregatus*, characterized by the evolution of a great number of spots, and extending rather by the evolution of fresh ones than by spreading of the old, and leaving little atrophic pits. This eruption reminds one of psoriasis when superficially regarded.

Lupus is most frequently seen in females, and, it is said, amongst the rural population. *L. vulgaris* develops commonly from six to twenty-five years of age, and before or about puberty, whilst *L. sebaceus* occurs mostly in early adult life, but seldom later than thirty-five or forty. The latter phase is much less common than *L. vulgaris*. It is rare to find more than one member of a family affected. As to the cause of lupus, much conflict of opinion exists, for some hold that it is a purely local skin disease, whilst others think it is only the expression of a dyscrasia, viz., struma. Those who refuse to admit its strumous origin, admit, however, the notably frequent concurrence of evi-

dences of struma. Certainly, some patients appear to be in fair health, whilst very many are possessed of feeble constitution, and suffer from deranged menstrual functions, etc. The association of chilblains with lupus is frequently observed, and the identity of the sites attacked is often remarkable. Lastly, we may mention that lupus may be excited in predisposed subjects, by exposure to the sun, or to kitchen fires, or to cold, etc. The early stages of *L. erythematosus* frequently pass unrecognized, and are mistaken for patches of chronic eczema erythematous, or seborrhœa, or chilblains, but *chronic erythematous* patches about the face or hands, tending to slow spread at their periphery and scar in their centre, should always at once excite suspicion. The dilated follicles studding the part are also very characteristic. The more raised scaly patches have been mistaken for a chronic patch of psoriasis which rarely exists, however, as a single patch about the face or fingers. The soft, semi-translucent nodules of lupus new growth, leaving scars, are very characteristic, but no doubt the serpiginous and ulcerated forms are occasionally liable to be confounded with tertiary syphilides, especially when no history of the latter disease is attainable. Even the most chronic superficial forms of rodent ulcer about the nose can hardly be mistaken, by paying attention to the characteristic hard-rolled edge enclosing the non-crusted scooped-cut ulcer of the latter. (*See also Serofuloderma.*)

In *L. erythematosus* there is a dilatation of the vessels, and an effusion of fluid and embryonic cells into the meshes of the cutis constituting the eruptive spots, and these changes are especially concentrated around the glands and follicles, leading to their hypertrophy, so much so that some consider it essentially and primarily a disease of the glands. As the process extends, the tissues of the older parts atrophy, and as the lupus cells are incapable of high development or further organization, they undergo

fatty degeneration and a scar consequently ensues. Kaposi and others think it, at any rate at first, an inflammatory process, and different in nature to *L. vulgaris*, but others hold it only differs from the latter in that the cell infiltration is less marked, more superficial and diffused, and shows less disposition to form "nests." The characteristic feature of *L. vulgaris* is the great amount of the chronic cell infiltration which tends to become concentrated in little "foci," cell-collections, or so-called "tubercles" which may contain a giant-cell. Indeed, Friedlander thinks these "nests" are identical with true miliary tubercles, but, Fagge says, there is not the same tendency to early caseation. Recently, the bacilli of tubercle have been recorded by several observers in the lupus nodules. The cell infiltration extends along the vessels, and the nests coalesce into the projecting nodules or tubercles. Their ulceration history is as described above.

TREATMENT.—In *L. erythematosus*, it is well to try to control the vascular congestion and infiltration of cells by local soothing measures (F. 20, 22, 83-86) or astringents, as glycerine of tannin, collodion, or perchloride of iron, and trust to internal medicaments to stop the process by elevating the general tone of the body, and counteracting any dyscrasia by arsenic, cod-liver oil, iodine, and tonics. If the patches are inflamed and crusted, they must be healed over by soothing unguents. It is generally held, however, that stimulating and resolvent applications are most efficacious, such as F. 31, 73-8, 68, 33, 44, 54, rubbed in *thoroughly* twice daily with a piece of flannel for weeks or months, or emplastrum hydrargyri (F. 88, 89) applied at night; others resort to painting on still stronger applications (F. 3, 10), repeated as often as the scabs produced are got away and the surface healed. But this form of lupus is very intractable to these measures, and resort has been made of late years with some success to destruc-

tion of the growth by repeated stabbings with a lancet, or multiple linear scarification repeated in different directions at short intervals. For *L. vulgaris*, destructive measures are generally necessary, and every one almost has had his favorite caustic. Excision and cauterization have also been widely brought to bear. It must be remembered that, if incompletely destroyed, lupus will certainly return, by its power of infecting other cells, so destructive measures must be thoroughly carried out; at the same time, the least possible scar is desirable. Hebra used largely F. 6, and F. 7 and 5 have been favorite remedies. Some like the late Mr. Startin's acid nitrate of mercury (F. 9); but decidedly the best remedy for the inexperienced to use is nitrate of silver in points, which should be bored in all directions into the soft melting lupus growth. No harm can thus be done, as only the diseased tissues are destroyed. The treatment of this form of lupus has, however, been revolutionized by the introduction of the sharp bone spoons, by which the soft lupus tissue can be scraped away thoroughly. By this means you cannot do too much, as the healthy tissues resist the action of the spoon. Cod-liver oil and iodide of iron are undoubtedly of immense benefit internally in many cases of lupus, and the affection has been known to disappear under the influence of iodide of potassium.

Lymphadenoma cutis is characterized by the development of tumors composed of adenoid tissue of various sizes and shapes in the substance of the skin. They are projecting, more or less rounded or oval, but generally flattened, firm and elastic, painless, more or less red or livid, and evidently stretching out the skin over them. They vary in size up to a small apple. They are usually discrete, and they may be few in number or very numerous. The trunk is especially implicated, though they may occur any-

where. As they grow more or less rapidly, they generally break down in the centre, and unhealthy, ragged, fungoid ulcers are produced. Cachexia and emaciation sets in, and death ensues in a few years. This disease is closely associated with, and indeed may be complicated by, Hodgkin's disease and leucocythaemia.

Medicinal Eruptions are those which are caused by the ingestion of drugs, and do not include the inflammations of the skin excited by the external application of medicines. (*See Dermatitis.*) Many of these eruptions are very definite and constant, recur each time the drug is given, and disappear with the discontinuance of the medicine; but some drugs excite at different times and in different people a variety of eruptions. Neither age, sex, nor conditions of general health seem, as a rule, to exercise any influence, and although in some cases the eruption is due to the long-continued or large administration of the drug, in general it seems to depend on a special peculiarity or idiosyncrasy of the patient, and no exact dose can be fixed as exciting it, just as some articles of food always excite certain symptoms in some people. A knowledge of these eruptions is necessary, as they frequently simulate the rashes of the acute specific fevers, surgical and puerperal erythema, roseola, syphilis, etc. Their exact causation is still involved in obscurity—viz., whether due to reflex action from the gastro-intestinal tract, or influence on the nervous system, or direct action of the drug on the part, either by special selective action, or irritant influence exerted in its excretion.

Arsenic need only be mentioned to say that it sometimes produces a brown pigmentation, and some erythematous blotches and urticaria, and that it has been credited by some with exciting herpes zoster.

Belladonna (with which may be included *stramonium* and *hyoscyamus*) seems to excite occasionally a vaso-motor paralysis and more or less widespread blush, or a scarlatiniform or coarser erythematous eruption is described.

Bromides, especially the bromide of potassium, excite many different phases of eruption, but all apparently specially connected with inflammation of the sebaceous glands. It may appear after a slight dose or after the medicine has been long pressed, or shortly after discontinuance of the drug. The acneiform (papular and pustular) eruption is well known, and is seen mostly about the ordinary acne sites, but occasionally it is widespread, and especially affects hairy parts. Sometimes these acne-like eruptions are confluent over erythematous patches and crustitial. Duhring describes a maculo-papular eruption with the sebaceous glands involved, accompanied by fever and constitutional symptoms, and simulating a syphilide. Furunculoid eruptions also occur, and may ulcerate, as the other bromide eruptions tend to do, and be covered with rupioid crusts.

Chloral sometimes excites a peculiar scarlatiniform or morbilliform rash without febrile reaction, as a rule, but associated with marked dyspnœa and great palpitation of the heart, etc., and supposed to be due to vaso-motor and pneumogastric paralysis. It is often determined and kept up by the administration of alcohol and meals. Its course is as follows: A diffused redness of the face with puffiness and conjunctivitis sets in, followed by well-defined and slightly elevated erythematous patches on the face and neck, extending and coalescing, and spreading to the shoulders, trunk, neighborhood of large joints, dorsum of hands and feet, etc. There is great irritation present, and the rash on the face is more crimson than elsewhere. It fades in a few days with occasional slight desquamation.

Copaiba is well known to excite a papular erythematous eruption, much coarser than scarlatina, with a considerable

urticarial element in it. It favors the hands, arms, knees, feet, and abdomen ; but is sometimes widespread. There is great irritation, a characteristic odor, and the rash fades without desquamation directly the drug is stopped. It must not be mistaken for syphilitic roseola.

*Cubeb*s and *Turpentine* but rarely excite eruptions.

Iodides, especially iodide of potassium, frequently excite eruptions, and may immediately follow small doses, and be due to idiosyncrasy and, it is thought, sometimes the non-elimination from diseased kidneys. As with the bromides, the eruptions vary very much. The acne-like eruption is very common, and occurs on the usual acne sites, but also about the limbs. It is but rarely confluent like the bromide acne. Peculiar bullæ of various sizes have also been noted in a number of cases, usually on the head, neck, and upper extremities, and the contents vary much from simple serum to a thick pultaceous mass. There is often an indurated base. Petechial purpuric spots, mostly about the legs, also occur, and urticaria, varying from the ordinary papules to large subcutaneous nodules, has been noted. Many regard most of the iodic eruptions as due to the irritating elimination of iodine by the glands, but others think they are due to a special action of the blood on the walls of the vessels.

Opium and *Morphia* can produce a scarlatiniform rash, often very diffuse, and with puffiness of the face, disappearing when the drug is discontinued, with desquamation sometimes very considerable. It is probably connected with the influence on the vaso-motor system and the diaphoretic action.

Quinine and its allies pretty frequently occasion an intensely itching or stinging scarlatiniform or morbilliform eruption, often, however, largely associated with an urticarial element, and generally attended with marked constitutional disturbance, commencing on the face and neck,

and spreading over the whole body. Usually much desquamation ensues.

Salicylic acid has been known to produce a diffuse or a patchy or papular erythematous eruption, sometimes associated with a sore throat. Urticaria and urticaria hæmorrhagica have also been recorded.

Many other drugs in rare instances excite eruptions, and only the chief have been here mentioned.

Melanoderma, or Melanopathia, or Melasma, signifies a state of increased dark pigmentation of the skin. Before proceeding further, it is necessary to point out that an increased deposition of pigment in certain regions occurs during pregnancy, in some women at the menstrual periods, and about the foreheads and cheeks of females suffering from dyspepsia and uterine derangements (*chloasma uterinum et gravidarum*) ; locally, after any irritant has excited a congestion of blood in a part—*e. g.*, after exposure to the sun about the hands and face (*lentigines*) ; after prolonged exposure to the fire about the legs ; and after the application of blisters, and especially mustard. Again, it occasionally complicates morphœa and scleroderma in a marked degree, and is left after the disappearance of a host of eruptions, more especially syphilis and lichen planus, and is sometimes a very conspicuous feature in chronic phthiriasis and scabies. It now and then temporarily ensues during the administration of arsenic, and rarely in a localized form about the neck. It is a secondary result of the syphilitic cachexia (*pigmentary syphilide*). True *melanoderma*, however, is a more or less widespread affection which cannot be relegated to any of the above-mentioned causes, and in what measure it is due to nervous influences (especially involving the abdominal sympathetic) is still a debated point. However, certain cases would point strongly to such a causation—*e. g.*, the well-known case of Rostan, who

turned a very dark color in a few days after condemnation to death; and Sarti's case of a man who, after a great fright, followed by severe illness, gradually got very dark. Extensive bronzing has been known to follow an injury to the back. It has also followed a severe attack of typhus. Other cases, again, of general bronzing at all ages, occur independently of any marked constitutional symptoms, and the cause is very obscure. There still remain two sets of cases, viz., the well-known *melaasma suprarenale*, occurring in connection with the destruction of the suprarenal capsules (*Addison's disease*), and an identical pigmentation, in which the capsules are healthy but the neighboring abdominal sympathetic is involved by a mass of diseased glands—the immediate cause, some think, of the bronzing in Addison's disease. Here there is a general deepening of color to brown or black pretty uniformly affecting the face, neck, backs of hands, the nipples, and genitals; and Dr. Greenhow has shown that Addison's disease very seldom occurs in persons past middle age, and that no partial discoloration of the skin can be relied on as diagnostic of Addison's disease in the absence of the characteristic constitutional symptoms. The presence of pigment patches in the mouth is not to be relied on as pathognomonic.

TREATMENT.—Manifestly, the treatment of general bronzing must be as yet most unsatisfactory, and cannot be discussed in a short space. For the local treatment of pigment patches, see Lentigo.

Miliaria is characterized by the formation of discrete, soft, bright-red, projecting, acuminate, excessively itchy or tingling papules, about the size of a pin's head or millet-seed (*M. rubra*). These papules may be capped by more or less fluid,¹ either only detectable by a lens, or enough to

¹ It is uncertain how far this fluid is retained sweat or inflammatory exudation.

make the eruption look like sudamina with congested bases. If this fluid gets opalescent, the term *M. alba* is applied, and these varieties may be seen commingled together with pure sudamina (*M. crystallina*), so that a multiform eruption results. The papules appear suddenly, last a few days, and a branny desquamation succeeds; occasionally, successive crops make the affection chronic. The eruption may be very closely set and associated with more or less general hyperæmia. Miliaria is produced under similar conditions to sudamina, the only difference being that in the former there are active congestion and inflammation around the follicles, and in the latter not. It is seen, therefore, not infrequently in the summer months, as a general eruption, and is to be diagnosed from papular and vesicular eczema, which it often much resembles, and from such a disease as rötheln. In warm countries, the well-known intolerably itchy and pricking *lichen tropicus*, or *prickly heat*, is nothing more than severe miliaria, and agrees in its characters with the description given above.

TREATMENT.—The most appropriate local applications are dusting powders (90), or a zinc and calamine lotion (83), and starch, or bran and alkaline baths (F. 1), are very comforting. Generally, the patient must adopt a cool regimen and light clothing, and avoid all habits inducing an excessive or sudden flow of sweat. Internally, saline laxatives and diuretics are useful, followed by a tonic.

Milium, or Grutum (*Strophulus albidus* of Willan), is the name given to an unimportant eruption of little rounded white papules in the skin, the size of a pin's head, formed by the distention of the sebaceous glands and deep part of the follicles with sebum. They therefore bear a close relation to comedo, but show no black point and no follicular orifice. They are seen about the face, especially the eyelids, of children and in adults, and occasionally

may be met with more extensively over the body. They may reach in the latter to the size of a pea, or even more.

TREATMENT.—Puncture and squeeze out the contents.

Molluscum contagiosum (*Bateman*) is characterized by the formation in the integument of softish or firm, rounded, projecting, movable, abruptly margined, discrete little growths, varying in size from a pin's head at their first appearance to a pea, or even larger. An umbilication on the summit of each leads the way to a central cavity filled with milky or inspissated contents, which can be squeezed out. The growths arise successively, and occur scattered sparsely or in groups, or crowded densely together, and their favorite site is the face, especially about the eyelids and mouth, but they may be seen about the backs of the hands, or the genitals, or indeed anywhere *except the palms and soles*. In adults they are in very rare instances seen as a general eruption. As each tumor grows very slowly, it acquires a semi-transparent look at the top, like a white currant or pearl button; it gets pedunculated, and tends to spontaneous cure either by a wholesale shelling out or by necrosis. It is essentially a disease of ill-fed, dirty children, but is contracted sometimes by adults, or a like affection may arise idiopathically in the latter. It is held to be contagious, because the different members of a family may be successively attacked, or several boys in a school, or many children in a court, and because the growths arise on the neck or breast of the nurse of an affected child, or it spreads in a hospital ward. No definite parasitic contagium has yet been made out. The exact nature of the growths, too, is a matter of controversy, for whilst their sebaceous origin (hyperplastic gland with degenerated contents) has long been unquestioned in England, principally by reason of the compound racemose gland-like structure, of late many competent observers,

from a study of the *earliest* appearances, conclude that they originate in the rete, and that the outgrowths become folded gradually into this gland-like structure. In children the diagnosis is only from warts; in adults, from warts especially about the genitals, and from commencing fibromata (formerly called molluscum fibrosum).

TREATMENT.—The subjects of the eruption are always those much benefited by tonics and cod-liver oil. Locally, the growths must be enucleated by squeezing between the nails, or be destroyed by a little acid or caustic, and pendulous ones should be ligatured.

Morphœa¹ of English writers, **Sclereme en pla-cards**, or **Sclerodermie en plaques**, of the French.—Addison's Keloid, as distinguished from the true or Alibert's Keloid, is a somewhat rare affection which, when once fully understood, can hardly be confounded with any other, but which presents much diversity of aspect, in consequence chiefly of the varying predominance of either hypertrophic or atrophic processes in the cutis, disturbances of pigmentation and vascular supply, and lastly distribution. A patch of morphœa usually commences as a delicate pigmented or rosy circumscribed blush or *tache*, whose centre gradually becomes depressed and more defined, incapable of being pinched up by the fingers, and gets paler and whiter, whilst the border is still surrounded with the purple or lilac halo, fading away gradually into the healthy skin. The central part gets solid, smooth, and polished, and the degree of whiteness increases from the hyperplasia and condensation of the connective tissue, and obliteration of the vessels, until it suggests a piece of ala-

¹ This disease is not to be confounded with any of the eruptions occurring as a part of Leprosy, and described formerly or now known (Spanish South America) as Morphœa.

baster or bacon fat having been let into the skin (*M. tuberosa vel lardacea*). Sometimes the epidermis gets like the bladder over a jam-pot, or separates. Simultaneously there ensue from the same causes more or less anaesthesia, blanching, or absence of the hairs, cessation of the functions of the sweat and sebaceous glands, and disturbance of the vascular supply, so that venules and dilated capillaries may be seen coursing irregularly over a patch, or more particularly showing as a violet halo round the edge. Occasionally the hyperplasia is sufficient to cause the actual projection of the surface into lumps or nodules, to which the term *M. tuberosa* would seem more applicable, and the hyperplastic process is finally succeeded by an atrophic one, causing a depression below the surrounding surface (*M. atrophica*).

This atrophy, however, may set in from the first, without the intervention of any marked hypertrophy, and we observe, then, only either a shiny, smooth, tense, shrunken, circumscribed area of skin, which seems closely bound down to the underlying parts, and if about a joint, seriously impeding its movements, or over the supra-orbital notch a depressed furrow. There may be considerable pigment disturbance in any of these phases, but mostly in the atrophic form, and then either the whole surface of the patch, or its periphery only, may be of a bistre, brown, or black color. The patches of morphœa tend to the rounded form, and vary commonly from the size of a half-crown to the palm of the hand, but they may be of irregular shape, or in the form of bands, and may exist as tiny spots (see also Atrophia cutis), or cover extensive areas by confluence (see Scleroderma). In number there may be only a single patch, at any rate for some time, or only two or three, or a great many, and though they do coalesce, it is remarkable how they tend to remain isolated. The favorite sites are the base of the neck and upper part of thorax, the

submammary region, the abdomen, the forehead, and then the extremities, especially the proximal parts, but no part can claim exemption. Its distribution also bears a relation which is very marked, in some cases, to that of the cutaneous nerves, as over the first division of the fifth; and again, it may be markedly unilateral, and only show apparent symmetry when the patches are bilateral and multiple. Mr. Hutchinson, indeed, goes so far as to say that the laws of distribution of herpes zoster apply here also. The onset and course of the affection are essentially chronic and insidious, one patch succeeding another after some interval, and attention may only be drawn by some local tingling, or itching, or numb feeling. Occasionally, the progress is more acute. The patches may remain stationary a long time, or come and go for many years (over thirty certainly), or the whole thing may clear up spontaneously. The prognosis is fairly favorable. It occurs mostly in females of weakly constitution and nervous temperament, and is very frequently associated with debility arising from pregnancy, lactation, and uterine derangement. It is met with mostly in the young and in early middle-life, and it may be considered as due to a nutritive debility especially affecting the nerves, and resulting in a concurrence of both hyper-production of lowly organized connective tissue and atrophy, interfering secondarily with various skin functions.

The *diagnosis* is from *leucoderma*, in which no structural changes occur; from the early eruptive phase of *anaesthetic leprosy*, in which there is a small-celled growth of a different nature, without the marked hyperplasia of connective tissue; and from *Alopecia areata* about the scalp, which is a simple atrophic process. Whether it is identical in nature with *scleroderma*—in fact, a circumscribed scleroderma—is still *sub judice*; but the coalescent and more diffuse forms are at any rate closely similar in aspect.

TREATMENT.—This should include good air, exercise, nutritious food, cod-liver oil, mineral acids, phosphoric acid, strychnine, iron and quinine, and arsenic.

Locally, mild stimulant liniments and other applications such as lin. camph. co., tinct. and lin. iodi, mild mercurials, etc., may be used, short of setting up inflammation, and the continuous electric current is very useful.

Nail Affections.—1. The nails, like the hair, are frequently implicated in any general malnutrition associated with a departure from the standard of health of the body—*e.g.*, we see from this cause opaque specks and patches in the nails, or a transverse groove from almost complete cessation of growth in severe illness, or a thinning, so that they may easily bend or break, or “clubbing” in any chronic interference (heart and lung disease) with the pulmonary circulation.

2. The nails may also become involved in more or less generalized affections of the skin—*e.g.*, they may be shed in pemphigus, and in the general desquamation after scarlatina; pustules (variola) or papules may form under the nail, as elsewhere; or they may get thickened, opaque, and rough in lichen planus et ruber, and in pityriasis rubra and psoriasis (*see below*). They may be implicated in ichthyosis and leprosy, and the matrix may participate in the inflammation in eczema (*see p. 69*) and chronic severe scabies. Lastly, in secondary syphilis, occasionally, the nails may become opaque, rough, and thinned, without affection of the matrix (Hutchinson), and in later syphilis, and probably in scrofula, the nail-bed of one or more nails—for it is generally multiple—may become the seat of offensive suppurative inflammation. Chloral, too, in rare cases, produces an ulceration round the nail.

3. The nails share also in more localized disturbances of

nutrition, as in injury or paralysis of a limb or nerve, or embolism of a vessel (shedding, hypertrophy, etc.).

4. Disease may be localized in the nails, as by the attack of a fungus (*see Onychomycosis*); or by the action of arsenic (stained yellow, greenish, or purple in centre); or dyes, and then the surrounding matrix or folds may be inflamed and suppurate. Sometimes from neglect or boot-pressure, one or more nails, especially on the feet of old people, may grow enormously long, and get discolored and variously twisted in the growth (*Onychogryphosis*), or the great toe-nail, particularly, may, in its growth, get pressed into the flesh, and set up inflammation (*Ingrowing toe-nail*), or an inflammation may arise from injury by a blow or splinter.

To two conditions it is necessary to refer more particularly. When eczema of one or more fingers, or other inflammation, spreads to or attacks the folds of the nail (*Paronychia*), or the matrix (*Onychitis*), the proper growth of the nail is interfered with, and the nail gets rough, uneven, pitted and furrowed, discolored, and sometimes distorted with imperfectly developed nail substance; or the formation of the nail ceases altogether, and as the nail travels onward, a curved ragged proximal border is left, a condition seen sometimes as the result of atrophy from general causes. In both these conditions the nails may be shed. So-called *psoriasis of the nails* is a term vaguely applied to a variety of hypertrophic conditions, either occurring in connection with general psoriasis or idiopathically. The nail gets glazed, discolored, and pitted; undergoes loss of cohesion and disintegration from the free edge and sides, and becomes thickened, brittle, and raised at the free end from its bed by a mass of epithelium. When accompanied by a general eruption, usually one or two fingers are affected, but sometimes nearly all the fingers

and toes of both sides are involved without any clue to its causation.

TREATMENT.—Any constitutional condition—*e. g.*, syphilis and scrofula—underlying the affection of the nails, must be combated by the usual remedies. Any inflammatory condition, such as eczema, must be subdued by the applications in use elsewhere, and the new nail will then be properly formed. If the nail-bed be suppurating, the nail must be removed, and the suppurating surface destroyed by antiseptic lotions or iodoform. An ingrowing toe-nail should be properly pared away and trained to grow properly, whilst the flesh is protected. Psoriasis of the nails, if associated with general psoriasis, is well influenced by arsenic, but the idiopathic condition is very intractable. Here the nails must be softened by soaking in hot water, and pared to the matrix, into which tarry and mercurial salves should be rubbed (F. 75, 53–55).

Nævus is a term applied to certain localized hypertrophic conditions of the skin and subcutaneous connective tissue, either congenital or acquired soon after birth, and involving either all the skin structures, or specially the bloodvessels, the papillæ, the hair, or the pigment, or several of these combined. They are popularly attributed to impressions or shocks received by the mother, or to her longings whilst *enceinte*. Blood vascular nævi (*Angiomata*) consist of dilated, distorted vessels, which are in great excess in the part and freely communicate, and the varied appearances and symptoms they present depend upon the depth to which they extend, or at which they are situated ; upon their size, which varies from a mere spot (*Nævus araneus*) to the area of the palm of the hand, or more ; upon the extent to which they are raised above the surface, and are complicated by hypertrophy of the hairs or papillæ, or admixture of connective tissue or fat ; and, lastly, upon the proportion

of capillaries, arteries, or veins composing them, and the activity of the circulation through them. The common delicate so-called "claret or port wine stains" are formed of capillaries, and their distribution in relation to nerves is sometimes very marked, as also is the case with other kinds of nævi. A great number of names have been applied to nævi, according as they are erectile, or pulsating, or cavernous, or subcutaneous and encysted, or lobulated, or mixed with fat. Nævi may be multiple, and may not grow at all, or after some growth remain stationary; many also tend to degenerate and disappear spontaneously. The various patches of excessive pigment (*N. pigmentosus*, toad marks), of excessive hairy growth (*N. pilosus*, mouse marks), and of hypertrophied papillæ, or warty growths (*N. verrucosus*) are included under the term *moles* or *spili*. These several conditions usually coexist. They are generally acquired soon after birth, and may be single or multiple. Lymphatic nævi are much rarer.

TREATMENT.—This must manifestly depend, in the case of vascular nævi, upon the size, the site, the depth at which the nævus is situated, and its formation. Compression, scarification, tattooing, vaccination, acupuncture with needles, hot or medicinally coated, cauterization by acids, acid nitrate of mercury, ethylate of sodium, and the galvanic cautery, the incitement of inflammation by the application of croton oil or tartar emetic, the use of setons, the injection of perchloride of iron, iodine, etc., and electrolysis are all means of cure adopted according to circumstances in the slighter forms, whilst, in addition, in more formidable cases, we can further excise, or use one of the several methods of ligature. Scars must necessarily result from their removal, where the latter is necessary or desirable, as with the various forms of *moles*, though it may be much diminished by the transplantation of skin from other parts.

Onychomycosis includes two diseases of the nails, dependent on the growth respectively of the favus and of the ringworm fungus. Only one or a few of the nails are usually affected, and these the finger-nails, though a toe-nail has been known to be also involved. If nails on both hands are involved, any symmetry is exceptional and accidental. The fungus either reaches the nails from a neighboring ringworm or favus of the hands, or is inoculated from patches elsewhere, as on the head. The affection is most commonly seen in those attendant on fungus cases. The affected nails become opaque, discolored, and softened, and the layers disintegrated, so as often to form a gryphotic mass. These changes commence and spread from any margin, and, as a rule, the surface of the nail is not notably roughened. The fungus will be found between the layers of cells, after a good soaking in liquor potassæ, consisting mostly of large beaded mycelial tubes.

TREATMENT.—As the nail is softer than natural, it is more easily scraped and cut away. In addition, *continuous* soaking of the nail by means of rag soaked in parasiticide lotions is effective, and the hyposulphite of soda ($\frac{3}{j}$ -ij to $\frac{3}{j}$ of water) is a good and cleanly application. If from any reason this course is impracticable, rub in thoroughly unguents containing parasiticides, such as thymol (F. 80) and salicylic acid (F. 64).

Pediculi. (*See Phthiriasis.*)

Pemphigus is an uncommon, non-contagious disease, mostly of very definite character, which is characterized by the formation of bullæ, arising in typical cases abruptly from the skin, and not surrounded by any areola. Whether there is a precedent erythematous spot depends on the rapidity of the fluid exudation, but as a rule it is very rapid. In size the bullæ vary greatly, and the variation

may be seen in any one case, from a pea to a nut, but they may be much larger, and it is certain also that they may be the size of herpes vesicles, and in rare cases pretty uniformly so. It is necessary for diagnostic purposes to appreciate this fact. There may be one or two or a great number present. In form they are mostly rounded or oval, dome-shaped and tense, and they are filled at first by yellowish serum, which later becomes cloudy, puriform, or rarely bloody. Like herpes, and unlike eczema vesicles, they do not spontaneously rupture as a rule, but after a few days gradually collapse. They may occur singly or be irregularly disseminated, or be grouped corymbosely or in crescents. In rare cases the disease runs an acute course,¹ but it is a very characteristic feature of most cases to be continued over a long period, perhaps years, by the successive evolution of bullæ, singly or in crops. They do not, as a rule, give rise to much distress, beyond some itching, or perhaps burning, but occasionally the sensations are very marked and intense. Neither are the general symptoms very noticeable often, though the evolution may be attended or preceded by some febrile disturbance, and not infrequently the subjects are manifestly debilitated, anæmic, and even cachectic. In the latter cases the bullæ may coalesce, and their bases be the seat of ulceration and crusting discharge, and some cases gradually progress to a fatal termination. From this statement it will be seen that the exact causes are obscure, and beyond noting its frequent association with nervous debility, gestation, etc., it is somewhat vaguely referred to a neurotic causation. No part of the body is really exempt, although the limbs are certainly mostly attacked; bullæ may be seen even on the buccal and vaginal mucous membranes. In the *diagnosis*

¹ Many cases of so-called *acute pemphigus* belong, no doubt, to the *vesicating erythema*.

of *pemphigus* but little difficulty can occur, although it must be remembered that bullæ may form in the vesicating forms of erythema multiforme and chilblains, in scabies (epidemic pemphigus of workhouses), in some drug eruptions (*e. g.*, iodide of potassium), about the hands in dysidrosis, and in syphilis, though in the latter disease the ecthymatous pustule is far more often simulated, except on the palms and soles of newly born children.

There is a very rare variety of pemphigus called *P. foliaceus*, which, beginning at one spot, commonly extends all over the body, and is characterized by the abortive character of the bullæ, which never rise into distinct tense blebs, but by their great number and coalescence give rise to flaky incrustations, and the disease usually terminates fatally after a variable time. It has to be distinguished from the very rare *universal* forms of eczema and the still rarer psoriasis, and especially from pityriasis rubra.

There are some other rare forms of abnormal vesicular or bullous disease which, for the present, may be considered under pemphigus—viz., (1) cases in which the bullæ are uniformly small throughout (*Pemphigus à petites bulles*), and are sometimes preceded or succeeded by prurigo-like itching papules (*P. pruriginosus*) ; (2) *Herpes gestationis*, in which, with recurring pregnancies, an intensely itchy mixed eruption of papules, vesicles, and bullæ occurs pretty extensively over the body; (3) *Herpes impetiginiformis* (Hebra), mostly a fatal affection, attended with great constitutional disturbance, in which vesicles grouped on inflamed bases, commencing about the genitalia, and, spreading widely, terminate in impetiginous crusts; and (4) *Dermatitis circumscripta herpetiformis* (Neumann), a disease pursuing a chronic course with great irritation, and implicating large surfaces of the body, in which papules appear, and spread peripherally to coalesce with others, whilst vesicles later surmount the centre and the spreading border.

TREATMENT.—In many cases arsenic (F. 139 *et seq.*) unquestionably acts like a charm in subduing the evolution of bullæ, and its administration should be continued for some time after the bullæ cease to appear. In all cases a general strengthening treatment should be pursued, by iron preparations, bark, cod-liver oil, etc., and in cachectic cases good food and hygiene are very necessary. Locally, the bullæ may be punctured, and a soothing dusting powder be applied (F. 91). In some extensive cases antiseptic oily applications (*e.g.*, carbolic oil and F. 49) are necessary to prevent drying and cracking of the surface and irritation, and can be applied after a bath. In very bad cases, more or less continuous or prolonged bathing in warm water affords great comfort.

Phthiriasis, Pediculosis, and Lousiness are terms applied to the disordered state of the skin produced by the attacks of pediculi or lice, and it is not to be confounded with *Prurigo*, a disease *sui generis*, and wholly unconnected with the presence of pediculi. Three species of pediculi attack man—viz., the *Pediculus capitis*, the head; the *P. pubis*, or crab-louse, mostly the pubic region; and the *P. corporis vel vestimenti*, the body. The intrusion of the proboscis of the louse into the follicles for the purpose of sucking up juices and blood occasions a localized inflammatory papule or urticarial wheal, and in children often a pustule, and secondary scratching to relieve the irritation, which, in its turn, causes further inflammation mostly simulating eczema, and varying in degree according to the state of nutrition and constitutional tendencies of the subject, just as with scabies.

Phthiriasis capitis, or Pediculosis capillitii, is found on the heads, chiefly of uncleanly and badly nourished children, but also not uncommonly in the long hair

of adult females who intimately associate with such children. The sucking and movements of the lice excite a papular, scaly, or, in children, a pustular eruption particularly about the occiput, frequently spoken of as *Impetigo* or *Porrigo capititis*. The pustules may dry into isolated thick crusts, or coalesce to form weeping surfaces, and the discharge mats together the hair into an offensive mass, whilst the related glands simultaneously inflame. From the scalp the pus is further inoculated about the face, neck, and hands. (*See Impetigo contagiosa.*) The lice lay about the bases of the hairs little whitish eggs or "nits," which are plainly to be seen and are very characteristic, and these "nits" hatch in about nine days. In children this disease should be distinguished from eczema of the scalp and face by its site at the poll and the presence of nits, though it must be remembered the two diseases may complicate one another. In adults it can only be confounded with the matted hair and inflamed scalp from dirt.

In **Phthiriasis pubis**, the crab-louse especially affects the hairy regions of the pubis and genital regions of adults, but may be found after a time on any hairy part of the body, as the axillæ and limbs, and, in extreme cases, even in the whiskers and eyebrows. A scrutiny readily shows the square flat louse as a dark object clinging to the bases of the hairs with its powerful claws. It causes much itching, but rarely more than a slight dermatitis. The eggs are attached to the bases of the hairs.

In **Phthiriasis vestimenti** the lice leave their lair to run about over the body for food, and when the patient is stripped they decamp, and may be found by careful search, with their eggs in the folds of the clothing. These pediculi excite, by their sucking, a little hemorrhage, which crusts over the mouth of the follicles, and remains after

the inflammatory papules, which also form, have subsided. In addition, scratching forms excoriations, urticarial wheals, and a dermatitis closely simulating eczema, of varying degrees of intensity in different subjects. The lice may attack any region, but especially favor the shoulders. They are found at all ages and in both sexes, but are particularly partial to ill-nourished and debauched elderly people (hence the old synonym *Prurigo senilis*), in whose skins chronic phthiriasis sometimes occasions deep pigmentation. Phthiriasis corporis must be distinguished from true prurigo (*see that disease*) ; from papular eczema, which does not specially favor the shoulders and neck and waist ; and from chronic scabies, which selects particularly the stomach and thighs and penis of adults, and the buttocks and feet and hands of children.

TREATMENT.—In *phthiriasis* we have to kill the lice, remove the nits, and heal the inflammation. Therefore, where possible, in *P. capitis* the hair with the nits attached should be completely removed *close to the scalp*, especially if the latter is very inflamed, and the inflammation then subdued by a mildly astringent salve (also anti-parasitic), such as F. 52, or by oleate of zinc ointment. If the hair cannot be removed, the scalp may be soaked repeatedly for twenty-four or forty-eight hours with common kerosene oil, which kills the lice and shrivels up the nits ; or daily with spirit or acetic acid or bichloride of mercury lotion ; the hair is afterwards to be thoroughly washed with a parasiticide soap, and a fine-tooth comb used persistently. Carbolic oil is a good remedy, and also F. 62 and 110 (*see F. 103–110*). In *P. pubis*, white precipitate powder dusted freely on, or any mild mercurial salve smeared on, or, if there is no raw surface, bichloride of mercury lotion (gr. viij to aq. $\frac{3}{ss}$) dabbed on, will speedily kill the lice. Treatment should be kept up for a fortnight in case any eggs hatch. In *P. vestimenti* the clothes should be thoroughly baked in an

oven, or, better still, compressed steam disinfecting oven (200° F.). The patient's skin then really requires only a thorough washing with disinfectant soap, or healing with a bland salve. If means are not at hand to bake the clothes, the treatment is far less satisfactory, and the skin must be coated thickly (so as to soil the clothes) with carbolic oil or ung. staphisagriæ, or F. 103–110, and a thorough change of clothes effected. Probably, however, lice can live in clothes without nourishment for some days. The decoctions of sabadilla and cocculus indicus are cleanly applications. The general health must be looked after in all cases.

Pityriasis is a term which has been loosely applied to a number of conditions in which there is an excessive shedding of fine bran-like scales from the skin. There may be also more or less attendant hyperæmia. Such a condition occurs in xeroderma (so-called "congenital pityriasis"), in simple dermatitis, caused by heat, cold winds, and irritants, in the erythematous and declining stages of eczema, and in other affections attended by an excessive determination of blood to the surface; also as a consequence of the growth of the *microsporon furfur* (tinea vel pityriasis versicolor), and again in the mildest forms of *seborrhœa* ("dandruff"). Branny desquamation also follows some exanthematous rashes and sweat eruptions. The term Pityriasis is now retained principally in connection with, first, an uncommon affection, at present unrecognized in England, called *P. maculata et circinata*; secondly, another rare condition following pityriasis rubra, and consisting in a plugging of the follicles by epidermal products, and known as *P. pilaris*; and, thirdly, a well-marked and severe disease termed *P. rubra*, which it is necessary to be acquainted with.

Pityriasis rubra, or general exfoliative dermatitis, commences as a reddened scaly patch on some part

of the body, and with more or less rapidity the whole surface becomes involved, and fully developed cases are characterized by a strikingly deep-red color of the skin, which is covered by large imbricated, loosely adherent scales or flakes of epidermis, which subsequently exfoliate continuously in enormous quantities. The disease may run an acute course, tending to a fatal issue, with prostration and emaciation, and subsequent diarrhoea, albuminuria, and pulmonary oedema, or be extremely chronic. Relapses are frequent, but some cases quite recover. To the simple hyperæmia present at first, may be added later, in chronic cases, more or less brawny infiltration stiffening the face and joints. Slight febrile action of a remittent type is common, the nails may be affected and shed, some fissures and slight oozing of serum may be present in places, and, lastly, some itching and burning sensations. As the universal hyperæmia and redness, with more or less shedding of flakes of skin, may be the leading features in chronic squamous eczema, in universal psoriasis, in lichen ruber, and in pemphigus foliaceus, the diagnosis is confessedly sometimes surrounded with difficulties.

TREATMENT.—Locally, the application of bland lubricating preparations are best, such as lin. calcis, glycerine of starch, but the surface must be kept very clean. Internally, arsenic is in high repute for many cases, and generally the system must be *persistently* toned up by tonics, especially of the nervine class, whilst the kidneys are kept active.

Porrigo is a term now almost obsolete, but was formerly applied (Willan) to a motley group of eruptions, mostly pustular and contagious, such as different aspects of favus, but also including alopecia areata, and ringworm of the scalp (Plumbe). Later, Startin limited the application of the term to a contagious eruption of *large flat pustules*, terminating in thick crusts, and without a surrounding in-

flammatory base, occurring anywhere on the body, but mostly on the scalp and face. But this even included probably several distinct affections. (*See* also under Impetigo.)

Prickly heat, or Lichen tropicus. (*See* Miliaria.)

Prurigo is characterized by the development of isolated papules, the size of a hemp-seed, of the same color as the healthy skin, or slightly pinker, and widely scattered over the surface, though leaving certain surfaces free. These papules, which are intensely itchy, are described as being subepidermic at first, and more readily appreciable to the touch than the sight, but later projecting distinctly, and acquiring a redder color from the means adopted to relieve the itching. The scratching abrades the top of many papules, which become capped with a tiny blood clot, or serum or pus exudes and crusts to simulate eczema pustulosum, and disguise the primary eruption; or urticarial wheals may be excited. Finally, the skin, after some years, gets pigmented, as in phthiriasis, and thickened and rough, especially about the legs, and desquamates in places; the hairs of the general surface also disappear. In old-standing cases, also, the crural and inguinal glands become symmetrically enlarged. The disease usually commences in childhood, is very chronic, and frequently lasts the whole of life, though it may almost disappear at times, and notably in the summer. The sites of attack are the trunk, the sacral regions, and buttocks, and limbs, especially on their extensor aspects. It may extend up the neck to the face in some degree, but never attacks the scalp, the flexures of the elbows and knees, the genitals, or axillæ. The papules are formed by a moderate exudation of cells and some fluid into the papillary layer, with secondary hypertrophy of the elements composing the parts, and pigmenta-

tion. Prurigo patients are generally pallid, and often ill-nourished, but no definite cause has been made out. Exclusive reliance for diagnostic purposes must not be laid upon the papules; but the history of the affection, and the sites attacked, should be noted. It may closely simulate chronic phthiriasis corporis (formerly called *prurigo senilis*) and scabies, and general chronic papular eczema with some admixture of the pustular phase and old-standing xeroderma; but local parasiticide remedies will cure scabies and phthiriasis, whilst eczema favors the flexures, and in children the scalp and face, and in the young there is more pus formation.

TREATMENT.—Inveterate cases will exhaust all our remedies, but much relief may be given by constant alkaline and emollient baths (F. 1); tar, carbolic acid, or sulphur soaps; the inunction of emollient and sedative salves (F. 21, 26, 29, 42, 86); and glycer. amyli or stimulating applications (F. 31, 73-8, 35, 62). Internally, the disease may be mitigated and held in check by arsenical, ferruginous, and mineral acid tonics, fresh air and good food, and cod-liver oil.

Pruritus means *a state of itching*, and this and allied disorders of sensation, such as tingling, formication, etc., are common accompaniments, in greater or less degree, of a host of skin affections characterized by structural alterations, such as prurigo, phthiriasis, scabies, urticaria, and eczema; but the term is specially applicable to a condition in which there is no primary structural disease of the skin, but the itching or disordered sensation is the sole symptom present, though the scratching, and rubbing, and tearing which it induces may bring about secondarily excoriations and various degrees of inflammation, according to the state of nutrition of the patient, and the severity of the attack. There is direct functional disorder of the nerves, or it is

reflex from some internal cause, and with these causes may be included that from venous congestion. It may be local, as about the nose of children affected with worms or other gastro-intestinal irritation ; about the genitalia or anus ; or more or less generally diffused, and often shifting about the trunk and extremities. So, also, it may be slight and unimportant, or become a very distressing and serious malady ; preventing sleep and wearing the patient down to a miserable condition. It is often worse towards night, or in the quietude of the bedroom, or greatly aggravated by warmth, or the contact of colder air on rising in the morning. Dr. Duhring and others have described a form seated especially about the inside of the thighs and the popliteal spaces, distinctly brought about by atmospheric conditions, and occurring in the colder months only (*P. hiemalis*). The more important local forms occur in the male about the anus, the scrotum, and perineum, and are generally traceable to some disorder of the alimentary or genito-urinary tract, or to liver disturbance. In the female, in addition to this, the genitalia are often the seat of distressing irritation, dependent on a variety of disordered states of the genito-urinary organs, to gestation, irregularities of menstruation, hysteria, etc., and often *diabetes*. True primary pruritus will have to be distinguished from itching induced by flannel, etc., in contact with a sensitive skin, and, where a secondary eruption exists, from phthiriasis, scabies, eczema, prurigo, and so on, by the sites attacked, the character of the eruption, the time of day or of the year when irritation comes on, etc. In connection with pruritus, it is well to bear in mind the remarkable disorders of sensation associated with *tabes dorsalis* and other diseases of the nervous system, in which the sensory tracts in the cord are involved.

TREATMENT.—The alleviation of itching, when part and parcel of various skin eruptions, will be found detailed

under the respective diseases. The treatment of primary pruritus, without structural alteration, is often most troublesome, and taxes all our resources. A most careful sifting of all possible causes should be made, and any departure from health should be rectified. Thus all hepatic functional disorders and congestive states of the rectum should be set right, and any genito-urinary or menstrual trouble remedied. The purely neurotic conditions are those, however, which defy treatment most, and remedy after remedy, internal and external, may be tried in vain. No rules can be laid down, for some patients can bear nothing but the most soothing applications (F. 20-22, 64, 83-6), others are relieved by cooling remedies (F. 14, 15), or astringents (F. 40, 79, 90, 93), or mild stimulants (F. 19, 23-25), or stronger ones (F. 31, 32, 112, 50, 57, 67, 73-8, 80), or alkaline lotions (F. 65, 66), or sedatives (16, 18, 26, 44, 46 47, 59, 61). Other patients cannot tolerate any greasy applications, and in a few the skin is so hyperæsthetic, that only water (hot or cold) or gruel bathing is possible. In neurotic cases strong nerve tonics should be given, and cannabis indica seems to have a decided controlling effect on itching in some cases. Occasionally it is necessary to try and procure sleep by chloral, bromide of potassium, or opium.

Psoriasis is a non-contagious, usually bilateral, and extensively distributed, very common eruptive disease of the skin, characterized by the evolution of dusky red, very slightly elevated, flat spots or papules of more or less circular outline, and of various sizes, covered to the thickness of a line with silvery scales, which are pretty easily detached, disclosing the hyperæmic base. The papules are formed probably by a primary hypertrophy of the rete and enlargement of the papillæ; the hyperæmia of the papillary layer and free formation of loose cuticle are secondary.

There is no discharge, and itching varies in degree, though usually not very marked. Further, it is essentially a chronic disease, for the individual papules tend to persist, and fresh ones evolve from time to time, and it shows a proneness to recur throughout life. The papules first appear as dull-red, circumscribed elevations, about the size of pin-heads, but faintly scaly, though not polished and not angular as in lichen planus (*P. punctata*).

As these spots enlarge centrifugally, the scales increase in amount, and the eruption has been likened to drops of mortar dried upon the skin (*P. guttata*). Still enlarging, the patches reach the size of a sixpence or a shilling, and, clearing centrally, tend to assume a circular outline (*P. nummularis*), and as they join with neighboring patches, large areas of skin may become covered (*P. diffusa*). Very large ringed patches are called *P. annularis vel circinata*, and constitute the *lepra* of older authors, and when these fuse to form patterns, the name *P. gyrata vel figurata* is applied. Very old thickened and infiltrated fissured patches with scanty scaling, closely resembling chronic squamous eczema, are called *P. inveterata*, or if patches are secondarily inflamed and weeping, which very rarely occurs, the name *P. eczemateux* has been applied. Lastly, in children and some strumous subjects, some cell and serous effusion may become mixed with the scales to form rupioid crusts (*P. rupioides*). Many of these forms occur together on the same subject. No site can claim immunity from attack, but certain regions are particularly affected, viz., the extensor aspects of the elbows and knees, forearms and legs, the buttocks, and the scalp.

Psoriasis is generally of wide distribution, and has a certain amount of symmetry, but there may be only a few patches, and it may occasionally be quite localized—*e. g.*, to the scalp or trunk. In children, even when widely distributed, not uncommonly the patches may leave the elbows

and knees unaffected. An important local variety is *P. palmaris et plantaris*, but this is infinitely rare unassociated with the eruption elsewhere, and the chronic papular or patchy scaly eruption in these regions is nearly always syphilitic, especially when unilateral, and when not eczematous.

Psoriasis is common in all ranks of life, and in either sex, and may begin at any age, even in infancy. It not uncommonly occurs in several members of a family and in several generations. The cause of psoriasis is not clearly made out, but McCall Anderson's view is possibly a true one, that it "is an inherited perverted tendency of tissue formation, which tendency lies dormant until called into activity by some exciting cause;" and it is probably not due to a special blood condition, or dyscrasia, or diathesis, but is due to a peculiar morbid tendency of parts of the skin. Some, indeed, from its symmetry, special distribution, heredity, tendency to recurrence, and the fact that it yields to arsenic, hold that it is one of a group of affections due to a special diathesis called the "dartous." The disease, though the subjects of it sometimes appear quite healthy, may be excited by any cause deranging the health, such as dyspepsia, pregnancy, lactation, struma, lymphatism, gout, etc. It appears to be more frequent in the spring and autumn.

Psoriasis must be carefully diagnosed from papular and squamous syphilides, squamous eczema, chronic tinea circumata, erythematous lupus, lichen planus, and pityriasis rubra. The diagnosis must be made after a careful examination of the total evidence, for however characteristic individual symptoms usually may be, none of them are infallible. Psoriasis, whether widely or sparsely distributed, almost invariably selects as one very favorable site the extensor aspect of the limbs, whilst the papular and squamous syphilides prefer the flexor aspects. Psoriasis is, as

a rule, more scaly, and when the silvery scales are removed, a hyperæmic base is disclosed. The distinction between the coppery or raw-ham color of syphilides, and the sombre red of psoriasis, cannot always be depended on, nor must the annular configuration of a psoriasis lead us astray to mistake it for a relapsing syphilide; yet there is a greater tendency to this form in old psoriasis, and syphilides rarely attain such a large size. Syphilides in some regions, as the forehead, tend to be crustitial, and they are often multiform, and relapses get more and more localized. Lastly, we have the history of the disease—in psoriasis the attacks perhaps dating for years back; in syphilis the sore, the adenitis, sore throat, miscarriages, and so on.

Lichen planus is a rare disease, and the red, but faintly scaly, angular, polished papules, tending to occupy certain sites (*see L. planus*), should not be confounded with psoriasis. The disks of *Lupus erythematosus*, which in the rare cases of wide distribution may simulate psoriasis, leave little scars by the atrophy of their centres; and when localized about the ears, face, and fingers, can hardly be confounded. On the scalp, however, patches of *L. erythematosus*, with loss of hair, may be mistaken for the disease under consideration. They are very persistent and rebellious to treatment. Old patches of localized chronic thickened squamous eczema are with difficulty sometimes distinguished, but a history of weeping will generally be brought out. Red, freely desquamating pityriasis rubra is usually *universal*, which psoriasis very rarely indeed is.

TREATMENT.—The first thing to do is carefully to examine into the health, and rectify by appropriate remedies any exciting or intensifying conditions, such as struma, lymphatism, and dyspeptic, plethoric, or gouty states; debility of any kind, such as from lactation, irregular menstruation, pregnancy, over-work, and sedentary habits, etc.; whilst proper hygiene, exercise, and food are insisted

on. In some acute, widespread, and hyperæmic conditions, diuretics are called for at first. After these exciting causes have been removed, or concurrently in some cases, arsenic is a remedy which exercises a powerful remedial influence over psoriasis, and, as a rule, the more chronic the stage of the disease the more is this drug called for. From three to five minims of the liquor arsenicalis (*see, however, F. 139 et seq.*) should be given, freely diluted, three times daily, after meals, and, if well borne, the dose may be gradually increased. The arsenic should be continued for some time after the eruption has disappeared. Phosphorus is a drug of the same class. Some recommend powerful stimulating alteratives, such as tar, copaiba, turpentine, and carbolic acid. There can be no doubt also that the patches can be removed in many cases solely by local applications, but internal and external treatment should as a rule be combined. It is but rarely that soothing measures are called for, and usually we may proceed to rub in stimulants and rubefacients, of which a great number are in use. Tar (F. 73-8), carbolic acid (F. 31, 75), mercurials (F. 52 *et seq.*) to not too extensive surfaces, turpentine (F. 82), pyrogallic acid (F. 63), chrysophanic acid (F. 33), and naphthol (F. 62), are perhaps the best (*see also F. 103, 104, 106, 113, 114*), and thymol (F. 80) is a mild cleanly application. It is probable that some of these local applications are absorbed, and assist by their alterative effect on the system. Where many scales accumulate, it is necessary to thoroughly shampoo the surface with some soap as a preliminary to other application. Indeed, baths may be freely used in this affection.

Purpura is a disease which is usually considered in treatises on affections of the skin, because of the constancy and predominance of the skin-lesions, and because the latter are often the only symptoms present. It is a non-heredi-

tary, sporadic, acquired, transitory disease, characterized by simple spontaneous extravasations of blood, and must be distinguished from haemophilia, from the purpuric complications of scurvy, leucocytæmia, the acute specific diseases, etc., and from the secondary hemorrhages due occasionally to intense local hyperæmia and inflammation—*e. g.*, in the erythema. The color of the lesions differs according to the depth at which the extravasations are situated, and may be bright red or more commonly purple, and as they disappear they go through a variety of tints. They are smooth and rarely elevated, and in size they vary usually from a pin-point to a finger-nail, but may form large sheets, and they do not disappear on pressure. They are mostly rounded, but occasionally irregular in shape, and appear suddenly and painlessly or with some stinging, and often in successive crops, in great numbers here and there on the surface, with most frequency on the lower extremities and afterwards on the trunk.

Purpura is a disease seen mostly during adolescence (fifteen to twenty years), and females are affected rather more often than males. It is usual to artificially distinguish a mild form (*Purpura simplex*), in which the lesions are of small size and limited to the skin, and a more severe phase (*P. haemorrhagica*, or *Werlhoff's morbus maculosus*), in which extensive ecchymoses may appear, and hemorrhage occur from mucous and serous surfaces, etc. The extravasations may appear suddenly without prodromata, or there may be some slight antecedent fever, headache, anorexia, and depression, or these symptoms may be marked. There may be some primary or secondary fever, and the hemorrhage induces anaemia. The disease usually runs its course in from two to four weeks, but may be continued by relapses, or occasionally it terminates fatally, by exhausting extravasations, profound depression, or complications. The cause is not clear; for though it mostly occurs in the weakly

and anæmic, it is not entirely a disease of cachexia, and may be seen in the apparently healthy and robust. Nor can it be referred exclusively to poverty, to deficiencies of certain kinds of food, and mal-hygiene. And with regard to the mode of extravasation, no definite alteration of the blood or vessels has been made out.

Flea-bites, which are occasionally met with in enormous numbers, must not be confounded with purpura simplex, and it should be borne in mind that purpuric spots may appear in syphilis and in diseases of the lymphatic system, and during the administration of iodides, and that hemorrhages may take place in a great variety of papular, vesicular, and bullous eruptions. The purpuric eruption of scurvy is distinguished from *P. hæmorrhagica* in being preceded by marked cachexia, due to deprivation of certain kinds of diet; scurvy also is epidemic, is associated with a bluish-red discoloration and sponginess of the gums, and the eruption tends to end in ulceration and gangrene. Sometimes the extravasations of blood into the skin in purpura excite urticarial wheals (*P. urticans*), where there is much gastric disturbance, and this condition should not be confounded with hemorrhage into urticarial wheals (*Urticaria hæmorrhagica*). There is still a variety of purpura to mention (some think it a distinct disease)—viz., *P. rheumatica*, or Schönlein's *Peliosis rheumatica*, in which, after a few day's malaise, the large joints (*e. g.*, the ankles and knees) become painful and sometimes swollen, and then purpuric spots appear in these regions or on the trunk or elsewhere, whilst simultaneously the joint pains subside. It is said not to be really rheumatic, because the affection never develops into acute rheumatism with endocarditis, and the characteristic sweats are absent.

TREATMENT.—The mineral and vegetable acids, tincture of perchloride of iron, ergot, ergotine injections, acetate of lead (gr. $\frac{1}{2}$, t. d. s.), oil of turpentine, are used to stay the

tendency to hemorrhage, but Immermann is sceptical of any great value attaching to any of these drugs, and reserves the iron preparations for the secondary anaemia left by the disease. All are agreed that good hygiene, *perfect rest*, a sparing diet, gentle laxatives, and iced fluids, are important factors in the treatment.

Rhinophyma. (*See Acne rosacea.*)

Rhinoscleroma is a very chronic, new small-celled growth of the corium and subcutaneous tissue of either the nose, upper lip, or surrounding parts, the mucous membrane of the nose, gums, palate, uvula, and even larynx. It occurs equally in either sex, and under twenty cases are on record, and these have been described almost entirely by observers at Vienna. A typical undoubted case has not yet been recognized in England. The growth may consist of separate nodules, or of a flat, diffused, raised thickening with well-defined borders. Its color varies from that of the normal skin to a reddish-brown, and is distinguished from other growths, such as lupus, syphilis, keloid, and epithelioma, in being much indurated, never ulcerating or pustulating, not degenerating, nor becoming absorbed, nor softened, and in resisting all anti-syphilitic and other internal remedies. No secondary deposits form, however long it continues; it does not appear to originate in scar-tissue, and it is distinct from epithelioma clinically and anatomically. Kaposi thinks it most nearly allied to small-celled sarcoma. It is not painful unless touched, it tends to recur when removed, and it seems to cause little inconvenience, except by a peculiar disfigurement at the end of the nose, and by blocking of the nose and throat.

TREATMENT.—Nothing is effectual except thorough cauterization or removal by the knife.

Ringworm. (*See Tinea.*)

Rodent Ulcer. (*See Epithelioma.*)

Roseola is a non-contagious, hyperæmic, widespread eruption of a rosy hue, which is usually grouped with the *Erythema*. It is either *symptomatic*, and then part only of certain acute febrile diseases, as rheumatism, vaccinia (about seventh day), cholera, variola, cerebro-spinal meningitis, etc.; or it is *idiopathic*, as seen mostly in children (*R. infantilis*), during change of season (*R. autumnalis* and *R. aestiva*), and in connection with slight stomach derangement, or it appears to be excited by ascarides, dentition, dietetic errors, etc. The eruptions included under this term vary widely in appearance. The symptomatic eruptions are often specially localized, as in variola about the groins, and often occur in diffuse patches. *Idiopathic roseola* is characterized by discrete spots, from the size of pin's points to papules, like erythema papulatum, or large irregular patches which may form rings and segments of circles (*E. annulata*), and be quite urticarial in character (*R. urticata*). In the smallest kind of eruption the tiny pimples are hardly ever quite punctiform as in scarlatina; they are never crescentic, though often patchy, and not so mulberry-colored as in measles; still these diseases may be closely simulated, and especially as there is often a little general disturbance, and some pyrexia, and injection of the eyes, nose, and pharynx. The tongue may be clean or coated. The child, however, rarely looks ill, though often anaemic. It is evident, therefore, the totality of symptoms in doubtful cases should be carefully balanced in the diagnosis of this disease from scarlatina, measles, rötheln, septicæmic rashes, and some drug eruptions.

TREATMENT.—In idiopathic roseola all that is required is a saline and laxative for a few days, as the eruption is

transitory and lasts only a few hours or days. Locally, a calamine lotion is all that is needed, or a cooling astringent wash, such as hazeline.

Rupia. (*See Syphilis.*)

Scabies, or the Itch, is a contagious disease due to the presence and burrowing of the *Acarus scabiei* or itch-mite in the skin. The male acarus wanders over the surface or hides in the natural folds, or beneath scales, but the impregnated female burrows into the epidermis, and lays her eggs (twenty or more) at intervals for three or four months within the intra-epidermic tunnel or *cuniculus*, and ensconces herself, and may be recognized as a tiny white speck, beneath a little eminence at the end of the tunnel. This burrow looks to the eye like a miniature mole-run, and is dotted with black specks at intervals, due either to excreta or the apertures of shafts leading down to the gallery. The tunnel causes a tortuous linear projection of the skin generally a few lines long, is pathognomonic, and can only be mistaken for a scratch. The eggs probably hatch in from five to fourteen days, and the young escape on the surface to repeat the life-history of their progenitors. Now, besides this primary feature, there are many secondary complications: thus, the entrance of the itch-mite into the skin commonly excites inflammation, viz., a papule, vesicle, or pustule, or sometimes a bulla; and further, the direct and reflex irritation set up and the often widespread sympathetic itching induce scratching and rubbing, and a multiform dermatitis, consisting of either erythematous blotches, papules (many capped with tiny blood-scabs), linear excoriations, vesicles, bullæ, and pustules forming crusts, ecthyma, boils, or urticarial wheals. The amount and character of the secondary inflammation set up, will vary widely as the patient is well or ill-

nourished, healthy or cachectic, cleanly or neglectful, and with the length of the attack, and the age of the patient. Consequently, in dirty cachectic people the disease runs riot, whilst in well-nourished people, who wash frequently, and so interfere with the burrowing and development of the acarus, perhaps only a few papules are excited about the forearms, thighs, and abdomen, and no cuniculi can be found. In children, with their pyogenic tendencies, an extensive ecthymatous pustular or bullous eruption may result. Epidemics of this nature occur in workhouses and other institutions where children are crowded together. In Norway, a neglected chronic form of scabies (*S. Norvegica*) with extensive inflammation and crusting, skin induration and pigmentation, has been described, and this severe phase has been recognized in tropical and other countries.

Itching more marked at night is a notable feature of scabies, and should always excite suspicion. The disease may be contracted at all ages, and in all classes, but the habits of children and young adults, and of the poor and uncleanly, lend themselves more to the contagion. *There are certain selected sites of attack which differ somewhat in the adult male and female and the child*, though in old-standing cases the disease may be widespread over the trunk and limbs. The face and scalp are only involved in very rare cases in children, and then only probably from sympathetic irritation. In the adult the acarus favors the soft skin of the interdigits of the hands and the wrists, whence it may spread to the hands and forearms; the upper line of the penis in the male, the axillary and mammary regions of the female, the belly and upper and inner parts of the thighs. In young children it is frequently seen on, and may be confined to, the buttocks and feet. Scabies is common in this country, more frequent on the Continent, and still more so amongst the dirty cachectic natives of many hot countries, where it is known by many local names—

e. g., *Malabar Itch*. Soldiers are peculiarly liable to contract this disease and phthiriasis, especially on campaigns (*Army Itch*). It may be caught from some animals who generally look "mangy," and cleanly adults get it from cohabitation with infected people, in travelling on the Continent, etc. The diagnosis of scabies, though generally easy, is sometimes attended with difficulty, for one cannot be absolutely certain of the presence of the acarus unless the burrows are found, and this tunnelling is prevented or delayed by cleanly habits and certain occupations (e. g., washerwomen), and consequently the greatest difficulty is experienced in private practice, where, moreover, scabies is less suspected. It should not be forgotten, too, that it may be only a complication of syphilis, leprosy, etc. After the burrows, the most important facts are marked itching, worse at night, the infection of several members of the family, and the pretty definite distribution of the eruption according to age and sex. Phthiriasis corporis is caused by lice in the clothes, tends to attack special regions, though sometimes widely spread, and is attended by formication, creeping, and burning. Pemphigus is simulated in children by the formation of only one or two bullæ about the hands and feet, mixed with the multiform eruption. Lichen urticatus (*Urticaria papulosa*) and true prurigo may be confounded with scabies, and also itching sudamina about the fingers, and miliaria in hot weather and in rickety children. Eczema in all its more chronic forms is, however, the disease *par excellence* from which scabies must be diagnosed, and indeed the multiform dermatitis of scabies is indistinguishable except by its usually discrete elements, its distribution, and absence of cuniculi.

TREATMENT.—The objects are to destroy and remove the acari and ova by the process least irritating to the skin, and then to heal any inflammation present. Consequently the selection of a parasiticide from preparations of sulphur,

tar, mercury, carbolic acid, turpentine, iodide of potassium, expressed oil of stavesacre, balsams of copaiba, styrax, and Peru, petroleum, creasote, and naphthol (F. 103 *et seq.*), must depend on the age, sex, and position of the patient, and on the degree of inflammation present. Hardy's rapid cure for hospital patients is as follows, and well illustrates the chief points to be observed: The body is thoroughly dressed with soft soap, and a warm bath taken to open up the cuniculi and expose and remove the acari and eggs, and then a modification of Helmerich's ointment (F. 105) is thoroughly rubbed into all the skin to kill any remaining acari by suffocation and poisoning, and the patient resumes the wearing apparel, which has meanwhile been heated to 100° or 110° C. At the end of three days the ointment is washed off, and any dermatitis healed by soothing measures. It will be found effective treatment to rub in, after the thorough washing, a milder sulphur ointment (F. 107) all over the body and limbs, night and morning, for three days, meanwhile not changing the under-garments. *Not too strong and not too long*, is a rule to be observed in the treatment, as these parasiticides are irritants, which excite a dermatitis with itching and burning, easily mistaken for an intensification of the original disease. Styrax balsam (F. 109) is a mild, cleanly, and effective parasiticide for children (*see also F. 108*). Appropriate soothing remedies are starch baths, and the calamine lotion, or oleate of zinc or bismuth ointment.

Scleroderma, or "the hide-bound disease," is a somewhat rare affection, characterized by diffuse hardening and stiffening of a large tract of skin, so that it looks shrunken and frozen, it feels cold, and cannot be pinched up from the subcutaneous tissues. It is impossible, indeed, to distinguish this diseased skin from that of some of the atrophic phases of morphœa, and many observers in this

country hold that the two diseases are essentially similar, only that the one tends to be diffuse and universal, and so often symmetrical, and the other circumscribed and generally limited in extent of distribution, and so often unilateral. It is thus sought to connect, by a long series of links, the circumscribed, well-defined, single-patched morphœa, often developed in marked relation to the distribution of a cutaneous nerve, and presenting either a marked hypertrophic stage or not, through the many-patched confluent morphœa involving the greater part of the surface, with the variety of conditions included under the term scleroderma, for the latter term is applied both to a universal morbid condition and one more localized.

The change commonly commences, unattended with fever, about the nape of the neck, or on the two legs or arms, and spreads symmetrically, until a large part or the whole of the surface is involved, or the change may be limited in extent—*e. g.*, to the hands. The diseased process often appears to be simply atrophic, and may progress unnoticed for a time, but in other cases the skin has been described as thickened, even brawny and leathery, and, moreover, an œdematous stage has been observed, but whether this is primary, or secondary from constricting bands, is not well made out. The subcutaneous connective tissues, the fat, fasciæ, aponeurosis, and tendons, may be involved, and even arthropathy and bone atrophy result. The process seems to consist in an increase and condensation of the cutaneous and subcutaneous fibrous tissue, and conversion of the fat into fibrous tissue, with subsequent atrophy, but the atrophic process, as in morphœa, may be the most marked feature from the outset. The induration, shrinking, contraction, and atrophy cause a painful sense of constriction and tightening: on the face, drag on the lids and lips; about the chest, interfere with respiration; and elsewhere, prevent the movements of the joints, and event-

ually cause wasting of the muscles. As in morphœa, little dilated venules may be seen coursing over the surface, and there may be various degrees of pigmentation present, preceding, coinciding with, or succeeding the induration. The diffuse nature of the change, its frequent symmetry, the absence of any defined border, and of the lardaceous-looking hypertrophy, are points relied on to distinguish scleroderma from morphœa, but none can be absolutely depended on. The temperature and sensibility are not very markedly altered. The disease may commence and progress in a slow and insidious manner, and even remain for long unnoticed, or its onset and spread may be exceedingly acute. It tends to disappear spontaneously, but only, as a rule, after a number of years. Scleroderma occurs mostly in women, and in early and middle life. As to its cause, it is now mostly attributed to a tropho-neurosis; and though it may be seen in apparently healthy people, there is usually a history of exposure, or rheumatic fever, or privation. In connection with scleroderma as here described, it is necessary to refer to a somewhat similar and well-marked affection of newly born children, called *Sclerema neonatorum*, which almost always ends fatally. It is usually generalized, and spreads from the limbs, for instance, over the surface, and is supposed by many to be of a different nature to the scleroderma of more advanced age, in that the indurated, tense condition of the cutaneous and subcutaneous tissues seems to be due to a peculiar kind of œdema and setting of the fat.

TREATMENT.—Continued warm baths and shampooings, and the infliction of cod-liver and other oils, afford relief, and are grateful remedies. Electricity also may be tried. The three cases of universal scleroderma which I have had under treatment very gradually improved from a pitiable condition under the internal administration of cod-liver oil, tonics, and small doses of arsenic, but it must be

remembered that the disease tends to get well spontaneously in time.

Scrofuloderma is a term which is used to denote the inflammation of the skin directly arising out of the scrofulous diathesis; but it has a different significance for many, for whilst some draw a distinction between it and lupus, holding the latter not to be an outcome of scrofula (scrofulide), others manifestly include cases of lupus associated with a strongly marked scrofulous habit. Consequently there is often much confusion as to the application of the term scrofuloderma. By it is here meant the chronic, boggy, unhealthy inflammation of the skin, different in aspect from lupus, with a tendency to suppurate and ulcerate and crust, forming ragged ulcers, with very irregular, undermined edges and an uneven base, and without disposition to heal, discharging a watery pus, and, when healed, leaving ugly, disfiguring cicatrices. The inflamed skin is usually also of a peculiar livid tint, and the scrofulous habit is marked. The commonest form starts from an inflamed gland, especially about the neck, and thence the skin becomes implicated. It may, however, arise independently of a gland, and then is, certainly with difficulty, distinguished from lupus in a very scrofulous subject. It starts, however, from a phlegmon or gummatous-like inflammatory mass, and not from an aggregation of nodules, characteristic of lupus vulgaris. There is another form of scrofuloderma consisting of rounded or oval collections of pus, perhaps as big as a walnut or egg, disseminated about the body (*phlegmonous scrofulides*). These present as doughy swellings over which the skin is at first unaltered; but it gradually becomes inflamed, and the abscess discharges. Some of these scrofulodermata in adults closely resemble the tertiary syphilitic neoplasms, especially if there is bone disease, but the edges of the

ulcers are less clearly defined and sharply cut; and in children the rare *phlegmonous syphilides*.

TREATMENT.—Internally, cod-liver oil, iodine, and ferruginous preparations, fresh vegetables, and sea air are important restoratives; whilst locally the unhealthy surfaces, after removal of the crusts by oil poultices, may be cleansed and healed by iodoform (F. 37), and iodide of starch-paste (F. 36), or later, by balsam of Peru, or a mildly stimulant and antiseptic lotion.

Seborrhœa signifies a functional disorder of the sebaceous glands, not usually attended by hyperæmia of the surface, and characterized by the accumulation upon the surface of the skin of an excessive amount of altered sebum. It frequently persists from birth about the scalp of infants, and may occur at any age, but is especially frequent about puberty, and is more common in females. So also it may affect any portion of the body where sebaceous glands exist, but is seen in by far the majority of cases on the scalp, and next on the face, and on the upper part of the trunk it is far more rare.

The subjects of seborrhœa are almost invariably anaemic or chlorotic, and debilitated, and have a bad circulation. Sometimes it is distinctly traceable to lowered nutrition after a fever, but not infrequently there is a strong family history of delicacy or pronounced phthisis. Two forms are described; one, a rare manifestation, seen generally about the face, in which the excessive sebaceous flow is fluid, giving the skin a greasy aspect, or sometimes collecting in drops (*S. oleosa*); and a second common form in which the sebum collects in concrete masses mixed with epithelium freely shed from the sebaceous ducts and glands. In intensity this second form varies widely from a simple pityriasic condition (dandriff) to a state in which the shafts of the hairs are ensheathed for a good part of their length by

the fatty masses, which bind the hairs down in a caked mass. It is a peculiarity of the disease on the scalp that it affects pretty nearly the whole surface uniformly, sometimes spreading on to the forehead, and that when the greasy plates are removed, the skin surface is not raw and weeping as in eczema, but generally of a dull leaden tint. *Seborrhœa sicca* less frequently attacks the face, and the more or less discolored delicate fatty plates adhere to the surface, which is often hyperæmic, especially about the follicles.

The disease does not give rise usually to much irritation, but on the face the patches are hot and uncomfortable. On the scalp the diagnosis from eczema has been already pointed out; and here it not infrequently complicates diffuse tinea tonsurans, and the diseased hairs are hidden by the fatty plates. About the face the greasy character of the crusts, the absence of infiltration and weeping, and the special implication of the ducts, should distinguish it from eczema; but the early stages of lupus sebaceus, before scarring has occurred in the centre of the patches, are with difficulty distinguished from isolated patches; indeed this form of lupus may supervene on seborrhœa. On the chest and back it may closely simulate tinea circinata and versicolor.

TREATMENT.—Constitutional remedies are certainly required, and nothing is more effective than cod-liver oil, whilst the anaemia and debility must be combated by iron preparations and suitable tonics. Locally all crusts should be removed by soaking in oil, and the scalp thoroughly washed every few days with an alcoholic solution of soft soap (F. 68), or a stimulant soap—*e. g.*, carbolic, sulphur, or tar, or a bicarbonate of potash solution ($\frac{1}{3}$ ss— $\frac{1}{3}$ j to aq. $\frac{1}{3}$ ij). Immediately following the shampooing, and in the intervals, an astringent (F. 79, 40, 42, 13) or mild stimulant (F. 52–55, 31, 32, 25, 30) must be well inuncted. A mildly stimulating treatment also suits the seborrhagic patches of the

general surface as a rule, but occasionally in both cases simple soothing remedies are called for (F. 20, 64, 84, 85, 86).

Septicæmic and Pyæmic Eruptions.—It is generally held that puerperal women and persons, especially children, after accidents and surgical operations, are particularly prone to acquire scarlatina, and that the symptoms of the fever in these circumstances may develop with abnormal rapidity. It is also certain that the classes of persons before mentioned not infrequently suffer from a non-contagious scarlatiniform eruption, which it is impossible in many cases to distinguish from true scarlatina. The eruption develops quickly after the accident or operation, is not usually universal, does not last, as a rule, more than twenty-four hours, is not accompanied by high fever, strawberry tongue, or more than a slight congestion of the throat, and is often not intense enough to occasion desquamation. It must not be confounded with the sudamina and miliaria of the puerperal state. This surgical erythema has also been noticed to depend on a local abscess, and very rarely on internal suppuration (hepatitis, empyema). In *pyæmia*, also, a pustular eruption, accompanied or not by cutaneous ulceration and abscess, has been described, but such cases must not be confounded with the peculiarly insidious onset of glanders and farcy.

Shingles. (See *Herpes zoster*.)

Strophulus, or Red gum, is a term which has long been used to denote an eruption of soft red pimples or papules in infants, and it is probable that it includes several distinct pathological conditions. Certainly the majority of these rashes appear to be of the nature of miliaria rubra, and to be hyperæmic sweat glands caused by the overheat-

ing and wrapping up of the child, or the excessive sweating so common in rickets, disorders of the alimentary canal, and teething. *Strophulus volaticus* (Willan) was the name given to the fleeting pink blotches of urticaria seen in children. The eruption is usually situated about the face and arms, and must not be confounded with the erythematous papules of hereditary syphilis seated about the genitalia and buttocks. The term *S. albidus* was formerly applied to the small pearly white specks seen about the face of children, and due to distended sebaceous glands (*see* Milium).

TREATMENT.—If due to excessive swaddling and heating, this should be rectified; and if to excessive sweating, the cause must be unravelled, and any stomach disturbance put right by regulation of the diet, and laxatives, and prevention of griping; or, if due to rickets, this should be treated accordingly. Locally, a lead or calamine lotion (F. 44, 83) is sufficient.

Sudamina, or **Miliaria crystallina** (Hebra), is a term applied to a non-inflammatory disorder of the sweat apparatus, characterized by the retention of sweat, which collects in the skin as little pellucid or opalescent, tense, globular, or oval, itchy, *discrete* vesicles, scattered irregularly or crowded together, fairly uniform in size, and forming rapidly and in successive crops. Each vesicle collapses in two or three days. The retention seems due to the sudden, or unusually profuse, formation of sweat, whilst its outflow is impeded by clothing, or the pressure of the bed; hence the eruption is seen commonly in many febrile states, such as acute rheumatism, pyæmia, lying-in, and puerperal fever, agues, etc.; also in rickety children, and in hot climates, and in this country in the summer months scattered about the hands. There is some difference of opinion as to the exact site and method of formation of the vesicle

—viz., whether the distended duct itself forms the vesicle, or whether the sweat oozes out and collects around the duct; also as to whether this takes place between the layers of the cuticle, or at the junction of the cuticle and Malpighian layer. Sudamina must be distinguished from eczema vesicles, which occur in groups on an infiltrated patch of skin and become confluent; and about the hands from scabies vesicles.

TREATMENT.—Usually not any is required, but the tiresomely itchy vesicles occurring about the hands may be pricked, and their recurrence prevented by tonic treatment.

Sycosis is a *chronic*, non-parasitic, and non-contagious inflammation of the hair-follicles and peri-follicular tissues, evidenced by the formation of red acneiform papules, pustules, and nodules, or *boutons*, around the hairs of the whiskers, moustache, or beard. There may be considerable itching, burning, or smarting, and if the patient shave much distress is caused. The intervening skin may be much swollen, and sometimes the pustules, which are usually discrete, are so closely studded over a part that an extensive crust is formed. The inflammation is usually symmetrical and widespread, though it may be limited altogether to one side or one region, as the upper lip, or only for a time. When long-continued, the growth of the hair may be considerably interfered with. As for the cause, it is impossible in some cases to find a clue, but generally the patient is markedly debilitated, and especially dyspeptic. Sycosis must be diagnosed from tinea sycosis (*Sycosis parasitica*), a rare disease in this country, though sometimes contracted from cattle and in the barber's shop. In ordinary tinea sycosis there is usually a history of an early circinate spreading ringworm, and the disease is long asymmetrical, and later the hairs present all the characters of those in tinea tonsurans. In the form contracted from

cattle the inflammation is very severe. Eczema of these hairy parts may also simulate sycosis, but the hairs are not specially involved, and there is free exudation of serum.

TREATMENT.—Internally the digestion and assimilation of the food must be thoroughly set right, by bismuth, alkalies, acids, bitters, and pepsine, as occasion requires, and the strength built up by aperient tonics and cod-liver oil. The habits also, with regard to excessive or ill-timed smoking and indulgence in alcohol, and regulation of the bowels, must be specially attended to. In chronic infiltrated cases, an alterative such as Donovan's solution (F. 135) is useful, but arsenic has no specific influence. Locally, after removal of the crusts, the disease should be treated as a simple inflammation by the soothing oleates (F. 20, 86, 85), or a lead or calamine lotion (F. 45, 83), and gradually the number of pustules evolved grows less and less. If very chronic, or if the skin be infiltrated, it is well for a time to rub in thoroughly at night some stimulant and resolvent salve (F. 69-72, 52-55). The hair should be kept *cut* short, and epilation sometimes affords relief if there is much pustulation, but the degree of pain caused by this process and its good effects vary widely.

Syphilodermata, or Syphilides, comprise the manifold manifestations of syphilis in the skin, a structure which is especially prone to attack in this disease, although no organ or tissue can claim exemption from the liability to be involved at some period of the evolution of the disease. The specific poison of syphilis is taken into the system from a local inoculation, and manifests its presence by setting up a peculiar inflammatory process in various parts of the body. The symptoms are usually grouped clinically into three stages—viz., the *primary*, or “those developed at the point of contagion;” the *secondary*, or those immediately succeeding the distribution of the poison

through the system, usually widespread and mainly limited to the superficial structures; and the *tertiary*, or later symptoms, which are more localized, and tend to affect a deeper set of structures. A syphilitic attack practically, as with smallpox, protects the sufferer from a second attack, and the intensity of the disease varies widely with the constitutional habit and state of nutrition of the subject—*e.g.*, its effects are much exaggerated in all ill-nourished conditions of body and in the intemperate. The sources of infection are the secretion from, and products of disintegration of, the primary sore, the discharges from the secondary eruptions, and the blood in the secondary stage, and the disease cannot be contracted from milk, saliva, urine, sweat, tears, or leucorrhœal discharge. Vaccination may be a means of inoculation. The poison must be brought in contact with an abraded surface, though it is said that women, when syphilized through the medium of a diseased foetus, develop no primary sore and no early secondary symptoms, but gradually get anaemic and debilitated, whilst alopecia, adenopathy, psoriasis palmaris, and ulcerated throats supervene till the tertiary evidences appear. Syphilis must be considered in its *acquired* and *hereditary* manifestations, as these present some differences.

Acquired Syphilis.—After the inoculation of the syphilitic virus there succeeds a period of apparent quiescence, both locally and generally, which is called the *period of incubation*, and any little excoriation or temporary inflammation or ulceration caused by irritant discharges tends to heal. After this period, ranging from ten to fifty or more days, but usually about twenty-five to twenty-eight days, the *primary* evidences of infection appear at the seat of inoculation—viz., the “initial sclerosis” or “primary lesion,” due to infiltration of the superficial meshes of the cutis with small round nucleated cells like leucocytes.

The exact appearances differ, for the infiltration may occur about an obstinate excoriation, or be diffused in the skin, or a rounded, flat, copper-colored thickening, or papule, may form and reach the size of a sixpence or shilling, and remain thus without particular symptoms, or desquamate, or it usually becomes superficially eroded in the centre and exudes a slight thin discharge, or becomes covered with a deposit like sodden chamois-leather. The sides of this "hard chancre" (Hunterian) are peculiarly hard and indurated, rounded and bevelled, the edges adherent, and the lesion but little vascular. This initial lesion must be carefully distinguished from the non-syphilitic "soft chancre" or chancroid, which usually commences within a week after infection, is often multiple, forms a comparatively deep, painful, inflamed ulcer, with sharply cut free edges, dirty gray base, and free discharge. The diagnosis is difficult when the two are coincident. It must not be confounded either with the multiple, itchy, short-lived inflammatory vesicles of herpes preputii.

A syphilitic chancre may occur on all sorts of sites—*e. g.*, on the lip, and there simulate epithelioma, but naturally most frequently on the genitals. The next symptom of the primary stage is the chronic *indolent* enlargement of the group of lymphatic glands in immediate connection with the primary sore, following the latter in about five to ten days. About seven weeks after the commencement of the initial sclerosis, and ten weeks after inoculation, the *secondary* or *exanthemic* or *constitutional* or *condylomatous* period commences by malaise, shiverings, anorexia, flying pains, headache, irregular febrile disturbance, more general adenopathy, and anaemia, and tends to last from six to twelve months. The eruptions correspond more or less closely to the roseolous, papular, scaly, vesicular, and bullous types, and tend to evolve slowly, to gradually die out spontaneously, and to recur either according to a

similar or different type. They rarely ulcerate unless the state of nutrition is very low. These eruptions may evolve within the mouth, and in this stage an erythema of the fauces also occurs, ending in the formation of small, rounded, cleanly cut ulcers, evincing no tendency to spread.

Iritis, which may relapse, and, less frequently, choroiditis and retinitis, may be also seen. About eighteen months after infection, the *period of latency* ensues, and lasts from a few months to twenty years or upwards, during which time the patient may be free from, or bothered from time to time by, eruptions on the skin, more limited in site and less symmetrical than the secondary eruptions—*e. g.*, so-called psoriasis palmaris et plantaris, and by ulcers on the tongue or buccal mucous membrane. Following this variable period come the *tertiary symptoms*, characterized by their greater proneness to relapse, their asymmetrical tendency, their disinclination to spontaneous disappearance, their deeper affection of the tissues, and tendency to attack more deeply situated structures. The skin is less prominently affected than in the exanthemic stage, and the new growth there seems more concentrated in nodules, and so often necroses, but does not cause any enlargement of the related lymphatic glands. In addition, localized low inflammations of connective tissue occurs—*e. g.*, in the periosteum of the long bones and of the skull, and in the capsules and interstitial tissue of the viscera; also characteristic tumors, known as gummata, ranging up to a walnut in size, especially affecting the subcutaneous tissue, the submucous tissue (*e. g.*, palate and pharynx), muscles, fasciæ, bone, and visceral connective tissue. This new growth, from its condensation and bulk, tends to end in degenerative changes, and in the skin and mucous membrane shows a marked tendency to break down into ulcers, which cicatrize in the centre, whilst the growths spread at the periphery to assume a ringed or crescentic form.

In proceeding to consider the syphilides more in detail, we must point out that, though they present an infinite variety of aspect, yet they are usually characteristic in appearance, by reason of possessing distinctive common family characters, not one of which is invariably present, yet many of them constant and associated together. Each type of syphilide has its hour in the natural evolution of the disease; but the stages of the evolution may be "forced" or retarded by constitutional peculiarities and other influences. The early syphilides tend to become generalized, disseminated, copious, symmetrical, and affect the skin superficially; the later ones less copious, less generalized, and less symmetrical; whilst in the tertiary stages the skin is deeply affected, there is more proneness to ulceration, and little symmetry and generalization, though often both-sided. Their slow evolution and indolent character are associated with the absence of marked itching and burning, except in the roseolous type, and distinguish them from the acute exanthems and exudations. A remarkable dull reddish-brown, copper, or raw-ham color usually characterizes them, though this color may be occasionally ill-defined or approached by other non-syphilitic eruptions. Their form or arrangement is peculiar, for the eruption tends to be grouped in a circular or crescentic manner, though this configuration may be seen in chronic psoriasis, ringworm, erythema, pemphigus, leprosy, etc. Further, owing to their slow evolution in relays, their indolence, and the fact that one type may be succeeded by another, a syphilitic eruption frequently shows a polymorphism which is only approached by one or two other affections, such as eczema and scabies —*e. g.*, macules, papules, pustules, and ulcers may exist together. The peculiarities of the scales, crusts, cicatrices, and ulcers, and the sites of selection, will be further referred to.

The **Macular or Roseolous syphilide** (*Syphilis maculosa seu erythematosa*) is the earliest to appear, and frequently passes away unnoticed, unless very copious or irritable. It occurs usually about the sides of the abdomen and thorax, or over the trunk, as erythematous macules, rose-colored at first, and fading on pressure, but later duller and eventually tawny, or they fade away leaving a brownish stain, hardly raised as a rule, in size from a lentil to a pea or shilling, usually discrete, and mostly rounded or approaching it, or rarely in crescents. It takes some days to evolve, and is usually indolent, lasting two or three weeks. It may be confounded with any macular erythematous eruption—*e. g.*, simple roseola, measles, and other acute specifics, erythema multiforme, urticaria, tinea versicolor, and medicinal rashes, and corroborative signs of syphilis in the throat and elsewhere must be carefully sought for.

The **Papular syphilide** (*Syphilis cutanea papulosa*) presents much variety of aspect, but all phases are characterized by a marked infiltration of the papillary layer, either immediately around the follicles or elsewhere, producing a solid elevation of the skin. The chief varieties are as follows: The *small or miliary papular syphilide, or so-called syphilitic lichen*, is a precocious uncommon form, and consists of shotty, rounded or acuminate, smooth or finely scaly papules, varying in size from a pin's head to a small pea, and disseminated irregularly or grouped corymbosely or in circular areas. Some papules may be capped by a little collection of serum or pus, thus passing into the miliary pustular or acneiform type. It may be confounded with lichen scrofulosorum particularly, and circumscribed papular eczema; but it rarely occurs without an admixture of larger papules and coincidence of other syphilitic symptoms. The *large papular or lenticular syphilide* is a very common form, and, whilst usually following closely on

the roseolous eruption, it frequently relapses, and may recur more or less localized for years. The eruption consists of flattened, circular, or oval, coppery, indolent papules, in size from a split pea to a sixpence, discrete or fused into patches, and with only very fine scales, if any. The papules may be further disk-like (*nummular papular syphilide*) or circinate, or moderately scaly (*psoriasiform syphilide* or so-called *syphilitic psoriasis*), or slightly crusted and eroded, especially about the forehead or hairy parts (*papulo-crustial syphilide*), or warty from papillary hypertrophy (the *vegetating* or *frambæsioid syphilide*). The site on which they occur has much influence in modifying their aspect; thus on mucous or muco-cutaneous surfaces and in moist situations—*e. g.*, beneath folds of skin, flexures of joints, between fingers and toes, beneath prepuce and labia, and about the perineum and anus, they occur as soft, flattened, auto-inoculable elevations with broad bases, often fused into masses, exuding a viscid secretion, and known as *mucous tubercles*, or *patches*, or *condylomata lata*, to be distinguished from other non-syphilitic warty growths. About the corners of the mouth or between the toes they may become fissured or ulcerated (*rhagades*), and in the mouth the soddened epithelium presents a silvery aspect, and on the palms and soles the thick epidermis modifies the eruption (the so-called *syphilitic palmar* or *plantar psoriasis*), so that it closely resembles ordinary eczema or psoriasis.

The earliest papular syphilides tend to be widely distributed, but the relapsing forms are prone to select the forehead, along the margin of the scalp (*corona veneris*) and temporo-frontal region, the nape of the neck and occiput, about the mouth and nostrils, the flexor surface of the extremities, the genitals, the groove between the buttocks, and the palms and soles. The large papular syphilide must not be confounded with psoriasis, and the diagnosis must be made after considering the total evidence, for in-

dividual symptoms are not infallible guides. Psoriasis is often hereditary, and begins in early life, recurring frequently; syphilis is acquired in adult life. Psoriasis especially affects the extensor aspects of the limbs, and particularly the elbows and knees, buttocks, and scalp; syphilis the flexor surfaces. Psoriasis papules are little elevated, except for the large imbricated, silvery, heaped-up scales which, when detached, expose bleeding points; syphilis papules are more elevated from the cell-infiltration, scantily covered, *if at all*, with delicate, dirty scales, which when removed disclose no bleeding points. The color is often deceptive, but psoriasis papules are of a less sombre red; syphilis papules frequently show some multiformity of aspect (crustitial, condylomatous) in different sites. Relapsing syphilides are frequently annular, and tend to get more and more localized, but only chronic psoriasis acquires the annular form, and the rings may attain a large size. With regard to localized palmar and plantar psoriasis, we may set it down that ordinary psoriasis practically never occurs limited *exclusively* to the palms or soles, and eczema rarely, also; and further, when they do occur in this situation, the affection is bilateral. Relapsing papular syphilides frequently remain localized to the palms or soles and unilaterally. The characteristic smooth, flat, pale or generally red, angular, shiny, small papules of lichen planus occurring about the limbs, neck, and trunk, are frequently set down to syphilis, because they do not tally with psoriasis, and the characteristic eruption is as yet not widely known.

The Vesicular syphilide need only be mentioned to say that it is an affection of very great rarity.

The Pustular or Pustulo-crustaceous syphilide (*Syphilis cutanea pustulosa*) presents great diversity of

appearance, owing to differences in the size of the lesions, the degree of purulence of their contents, and their arrangement and distribution. These eruptions may be conveniently grouped around certain types, such as acne, herpes, varicella, variola, impetigo, and ecthyma. The *acneiform* or *miliary pustular syphilide*, which closely simulates acne, is to be associated with the *miliary papular* form. It is uncommon, frequently coexists with the papular form, and is an early eruption. It consists of hard, copper-colored papules, commonly developed around the follicles, varying in size from a pin's head to a split pea, and surmounted by a little collection of pus, which dries up into a little crust or thick scale, leaving on its fall a slight scar. This eruption may be widely sown or more localized, and occurs disseminated or in groups. It must be distinguished from general acne cachecticum, iodide of potassium acne, varioloid, and artificial acne, and in its localized relapsing forms about the face, forehead, and scalp, from ordinary acne and *A. varioliformis*. The *varicelliform* and *varioliform syphilides* are also closely allied to this, and cannot easily be distinguished by words, but the shotty base is less in proportion to the fluid, and the whole has less resemblance to acne, though they have to be carefully distinguished from cases of pemphigus with little bullæ, and from scabies. The *impetiginous syphilide* is so called from its resemblance to the small patches of pustular eczema (impetigo). The pustules, which appear as such, are short-lived, grouped together on a coppery, infiltrated base, and a crust rapidly forms. It is comparatively a late form, like the ecthymatous syphilide, and tends to be localized about the face, genitals, and scalp. In broken-down subjects there is a good deal of ulceration and scarring. The *ecthymatous syphilide* resembles ordinary ecthyma, and consists of short-lived, isolated, and disseminated, scanty, flat pustules, varying in size from a pea to a cherry, arising

on a copper-colored base. A thick, dirty, greenish or brownish crust quickly forms, beneath which ulceration may proceed, and be of a very deep and spreading character in cachectic subjects. It is very difficult to separate this from the bullous form, and they may be considered together, *though any eruption like ordinary pemphigus in acquired syphilis is excessively rare.* The more severe varieties occur at the end of the secondary, or in the tertiary period; and in these late forms the spreading ulcer adds layer after layer of scab from beneath, so that a stratified cone-shaped large crust is formed of highly characteristic aspect. This variety is known as *Rupia*. The diagnosis of the earlier superficial forms is from simple ecthyma, or discrete pustular eczema occurring in cachectic subjects.

The rare **Pigmentary syphilide** is indistinguishable from a delicate leucoderma, and occurs in women especially in the late secondary period about the neck, and sometimes more extensively. It is not to be confounded with the marked stains left by all syphilitic eruptions.

The **Tubercular or Nodular syphilide** is common after the second year, but gets less frequent after the sixth or seventh, and is accompanied usually by marked cachexia. It presents as more or less rounded, circumscribed, firm or even hard nodules in the skin, varying in size from a pea to a bean or larger, of a coppery or livid hue, evolving indolently and painlessly. There are two varieties, viz., the *non-ulcerating*, or *resolutive*, with smooth, shining, rounded nodules, but rarely desquamative or crustitial, evolving in crops over neighboring regions, and so appearing to wander; discrete or arranged in characteristic circular, reniform, or serpiginous groups, which disclose the nodular character only at the margin, and occurring about the face, espe-

cially on the bottom of the neck behind, or about the sternal and gluteal regions; and secondly, the *ulcerative*, which is only the first form broken down into ulceration. This ulceration may be comparatively superficial, or deep and perforating, destroying the nose or other such parts. A single tubercular syphilide of the face might be mistaken for a rodent ulcer, and circinate non-ulcerating groups are sometimes confounded with patches of chronic psoriasis. The coppery color of the nodules, the grouping, the frequent occurrence on the face, and the muddy cachectic aspect, make the diagnosis from lupus vulgaris sometimes difficult. Lupus vulgaris begins, as a rule, in early life, and the nodules are softer, of a lighter-red color, more gelatinous-looking, and they are really formed by the confluence of tiny deep-seated points. The kidney-shaped crescent of the syphilide is not assumed by lupus. Wide-spread discrete nodules may closely simulate tuberculated leprosy.

Syphilitic gummata of the skin rarely occur before the third year, and commonly much later still. Usually not more than two or three are found together, and their favorite sites are the face, scalp, and extremities about the joints. They grow from pea-sized, firm, rounded nodules, and reach the volume, perhaps, of a horse-chestnut. They are at first elastic, circumscribed, and freely movable. Where there is much loose connective tissue, the skin is only rendered livid; but if confined beneath by bone, they project as ovoid swellings, and the skin becomes implicated, and an ulcer forms with steep punched-out edges and an uneven foul base, discharging an offensive ichor. Such multiple ulcers about the upper or middle third of the leg are very characteristic. Sometimes the gummata are diffuse. They must be diagnosed from scrofuloderma and

multiple tumors such as fibromata, lipomata, sarcomata, carcinomata, and lymphadenomata.

Syphilitic alopecia is brought about by the general state of malnutrition in the early secondary and later periods, and is generally diffuse, and also by infiltration of the scalp by the neoplasm, and then it is patchy. If the alopecia is universal, the scalp may have a polished aspect.

Syphilitic onychia and perionychia occur also from the cachexia, or from infiltration of the root or matrix by syphilitic new growth, which may break down into ulceration. Perionychia is often associated with rhagades, and foul punched-out ulcers between the toes.

Hereditary Syphilis differs from the acquired form in the absence of the initial lesion and its concomitants, and to some extent in the mode of evolution, inasmuch as the symptoms characteristic of the several stages frequently overlap one another irregularly—*e.g.*, gummata, visceral and bone lesions may occur in intrauterine life, or coincide with symptoms characteristic of the secondary or exanthemic stage of the acquired disease. In other respects, allowing for variations due to anatomical and physiological peculiarities of the infantile skin, the course of the disease is very similar, and the skin-lesions analogous. The early eruptions tend to be copious, widespread, superficial, and symmetrical, and the relapses and later lesions are more localized, asymmetrical, and affect the tissues deeper. The early eruptions may be erythematous, papular, or pustular, whilst the later lesions are more tubercular or nodular and gummatous. Polymorphism is common. Hereditary syphilitic eruptions, as with other infantile skin-lesions, are less indolent and apyretic than in the adult, and there is a greater tendency to the formation of pus.

The consequence of the embryo being syphilitic is to

cause abortion in about one-third of the cases, owing to the death of the foetus, etc. The month of pregnancy at which this happens, and the number of successive abortions, vary materially with the activity of the poison in the parents, and the consequent degree of syphilization of the embryo and time of the death of the foetus, etc. Of syphilitic children born alive, 24 per cent. die in the first six months, it is said, from the intensity of the disease, visceral lesions, general failure of nutrition, or intercurrent mischief. An aborted foetus has a macerated, easily separable, livid skin, without any eruption, or a bullous one usually confined to the palms and soles. It is exceptional for a living syphilitic infant at its birth to bear traces of any syphilides, but if it does, the prognosis is unfavorable. A syphilitic child is often remarkably healthy-looking, but in from one week to three months, and commonly about a month after birth, the child gets peevish and irritable, and acquires a catarrh of the nasal mucous membrane ("snuffles"), not to be confounded with non-specific infantile coryza. Symmetrical syphilides appear, especially about the upper part of the thighs, genitalia, and buttocks, and may gradually extend over the body and face.

These syphilides are usually of an erythematous macular character, often mingled with soft papules (not to be confounded with intertrigo of infants from irritating discharges, etc.), or they may closely correspond with the different varieties of papular eruption seen in the adult, but moist, crustitial, pustular, and ulcerating eruptions are relatively more common. The characteristic raw-ham color of the eruptions is usually marked. Sometimes the greater part of the surface is covered with sheets of dull red, shiny, erythematous, desquamating eruption. Meanwhile thrush¹

¹ Mothers in England always describe the *thrush* as passing through the gastro-intestinal tract, and appearing on the skin around the anus as the erythematous rash.

and mucous patches appear in the mouth, the child pines away, acquires a hoarse cry and dirty pallor, or *café-au-lait* color of skin, and assumes a curiously stunted, wrinkled, ill-nourished, senile aspect. The liver and spleen may occasionally be felt to be enlarged, diffuse stomatitis and swelling of the gums without ulceration cause the early decay of the milk-teeth, and the characteristic malformation of the permanent set. Condylomata appear a few weeks after the onset about the anus and mouth especially, and in the latter situation, when they ulcerate, leave shiny cicatrices, which are of great diagnostic importance in after-life. About the fifth month the eye affections are not very uncommon—*e. g.*, usually symmetrical iritis, and inflammation of the vitreous, choroid, and retina. If the child survives, relapses of the eruptions may occur for a considerable time, with diminishing copiousness and extent of distribution. These symptoms correspond with the secondary stage of acquired syphilis, and extend over a year or eighteen months, as a rule; after two years of age these eruptions are very rare.

In contrast with acquired syphilis, various characteristic lesions of bone may occur—viz., thinning of the cranial bones in spots and patches (craniotabes), osteophytic thickenings or bossings about the anterior fontanelle, and swellings about the junction of the epi- and diaphyses of the long bones, etc. As the child grows up, the traces of past disease are seen in the stunted growth, the dirty anaemic skin, the collapsed bridge of the nose, the high broad forehead, the decayed milk-teeth, or divergent, pegged, notched, central upper permanent incisors. The symptoms corresponding to the tertiary stage of acquired syphilis, though they may be present in utero or infancy, usually occur after the fifth year (Hutchinson), or about the second dentition, or puberty. Tertiary skin-lesions have been recorded up to twenty or later. A curious form

of deafness coming on about puberty, and interstitial keratitis, kerato-iritis, etc., are also observed.

The **Erythematous Macular syphilide** rarely bears any close resemblance to the roseolous eruption of acquired syphilis, either in aspect or site. It especially affects the upper part of the back of the thighs, nates, and genitalia, and thence may spread over the whole body. These ill-defined, coppery macules may run into large patches, and are often associated with diffuse desquamative conditions of the palms and soles. The *papular syphilides* are often developed about similar regions by the gradual infiltration of the neoplasm into the macules, and in other cases they correspond more closely with the characters seen in acquired syphilis. The circinate appearance is rarely seen. Condylomata, as might be expected, are of frequent occurrence about the mouth, nose, anus, toes, and moist folds of skin. Erosion and crusting and the formation of little pinched-out ulcers is common. *Pustular syphilides* of all sizes are frequent, and a multiform eruption of macules, papules, and small pustules must not be confounded with eczema, or especially scabies. Rupial crusts are very rare. The *true bullous syphilide* (*pemphigus*) is far more frequent than in the acquired disease and may occur as early as the sixth or seventh month of intrauterine life, and so is often present at birth or a few days after. It is the most precocious syphilide of hereditary syphilis, and may occur as late as the eighteenth day, or perhaps later. The bullæ range in size from the varicella eruption upwards, and are surrounded by a livid areola. They are characteristically developed about the hands and feet, especially the palms and soles. The *tubercular syphilide* is very rare, but, it is said, may be met with from the sixth month till just after puberty. It must be diagnosed from lupus and scrofuloderma. The *gummata* do not differ materially from those

seen in acquired syphilis, but a rare form simulating furuncles may be mentioned (*Phlegmonous syphilides*).

TREATMENT.—We possess in mercury and the iodides of potassium and sodium constitutional remedies of undoubted efficacy in the treatment of syphilis. Mercury is the curative agent we employ in the primary and secondary stages, and its influence grows less effective as the late secondary, and especially the tertiary, symptoms appear; and it is then that iodide of potassium comes into play, for it is useless in early syphilis. It should be borne in mind that syphilis is a most depressing and anaemia-producing disease, and, therefore, the system should be supported steadily by tonics and cod-liver oil, fresh air and exercise, plain and nourishing diet, and excess of alcohol should particularly be avoided. The exhibition of mercury should be continued, with some intermissions, for at least a year. The tonic effects are required, and salivation is not needed. It is useless to destroy the initial lesion, which may be dressed with some simple lotion, as black or red wash, lead lotion, or, if there is suppuration, iodoform. Mercury may be exhibited by the mouth in pills, powders, or mixtures; through the skin by fumigation or inunction; hypodermatically, or per rectum by suppositories. The method of exhibition chosen must depend on many circumstances, such as the health of the patient, his idiosyncrasy with regard to mercury, his means, etc. Gray powder, blue pill, and the bicyanide and protoiodide of mercury are amongst the best preparations by the mouth (F. 134, 133, 132, 131), and to these, opium, henbane, or conium may be added if the bowels are much irritated. The bichloride of mercury (F. 124-6) is useful in later stages. Inunction is effected by rubbing into the skin each night a scruple of blue ointment, taking care to vary the non-hairy site each time, and oleate of mercury (F. 51) has also been substituted. In infantile syphilis, a cloth may be kept saturated with the

ointment and bound round the waist by oil silk, but the gray powder (*gr. j-ij bis die*) is very convenient for children. Calomel fumigation (F. 2) is preferred by some as not deranging the stomach, and salivation is rarely produced by it; and it has this advantage, that the skin affections, where extensive, are simultaneously attacked locally. It is debilitating, however, and catching cold must be avoided. The subcutaneous injection of mercury is a rapid method for some cases, but is not much used in this country. Iodide of potassium may be combined with mercury (F. 127, 128, 130), where it is possible the syphilis is still amenable to both drugs, and in late syphilis the iodide of potassium may be conveniently dissolved in the syrup of the iodide of iron (F. 136, 137). Some persons are extremely susceptible to iodine, and rapidly get iodized, whilst others bear grs. v-x-xv of the potassium salt *t. d. s.* well. Where the health is greatly broken, a sojourn at the seaside or a sea voyage is advisable. A very thorough treatment by the inunction of mercury and the administration of sulphur waters is carried out at certain spas. Locally, extensive, non-ulcerating eruptions may be dusted with powders or simply hidden by calamine lotion (F. 83) mixed with black wash, or eruptions limited in distribution may be treated by mercurial salves (F. 50 *et seq.*). Where ulceration exists, the crusts must be removed by poulticing, and the surface dressed with iodoform applications (F. 37), the iodide of starch paste (F. 36), mercurial plaster (F. 88, 89), local mercurial fumigation (F. 2), or simple healing dressings (F. 52-54). Condylomata require strict cleanliness, separation of contiguous surfaces of the skin, and the application of a dusting powder of equal parts of calomel and either magnesia, oxide of zinc, or starch (F. 50).

Tinea is the generic name given to diseases caused by a group of certain vegetable parasites, as the term *phthiriasis*

is applied to the affections caused by lice. There are several different kinds of fungi which commonly flourish on the human body—viz., the **Achorion Schönleinii**, which produces *Tinea favosa*, or “favus” of the scalp, general surface, or nails; the **Trichophyton**, which causes *Tinea tonsurans*, or ordinary “ringworm” of the scalp, *Tinea circinata*, or “ringworm” of the general surface, *Tinea trichophytina unguium*, or “ringworm” of the nails, the so-called *Eczema marginatum*, and *Tinea sycosis*, or “ringworm” of the hairy parts of the face; the **Microsporon furfur**, which occasions *Tinea* or *Pityriasis versicolor* (formerly called *chloasma*). Lastly, **Chionyphe Carteri** is supposed to be the cause of *mycetoma*, or “madura foot,” or “the fungus foot of India.” By many, one form at least of *alopecia areata* (*tinea decalvans*) is held to be brought about by a fungus, the *microsporon Audouini*. For ringworm and favus of the nails, see Onychomycosis.

Tinea favosa is a very rare disease now-a-days in England, but is somewhat more common in the large cities of Ireland, and especially Scotland. It is occasionally met with in the United States. It is acquired by direct contagion, or by transmission from such animals as mice, rats, cats, canaries, etc. Favus is very rare in infants, but attacks particularly very poor, ill-fed, dirty children, and when seen in adults is generally of long standing. The favus fungus (*Achorion Schönleinii*) grows and flourishes between the upper and lower layers of the epidermis and in its appendages, and especially around the hair-follicles. The earliest signs are rarely observed, and the disease is generally well established when the patient is seen. If the surface has been cleansed for the occasion, it may look like a healing eczema, but in about three weeks a number of little, soft, millet-sized, straw- or sulphur-yellow points (not pustules) are seen to form, each perforated by one or more

hairs. These points grow to form raised, dry, friable, and laminated disks, the size of a threepenny piece, becoming depressed in the centre and elevated at the edges (the favus caps or *godets faviques*). Each disk is covered on either surface by epithelium, and when detached from its bed reforms. After long continuance, pressure causes atrophy of the skin and characteristic scarring. These yellow crusts may be discrete or confluent in large honeycomb-like masses, and then their individuality may be more or less retained or lost. The hairs are attacked, and rendered opaque, lustreless, and brittle, but not to the same extent as in ordinary ringworm. Favus most frequently attacks the hairy scalp, but may be found on the extremities, trunk, and elsewhere. It can hardly, *when well developed*, be mistaken for any other disease, and there is a peculiar smell emanating from the patches, comparable to the odor of mice or a cat's urine. Each favus crust consists of a granular matrix, now known to be formed by the disintegration of epithelium and sebum, in which a multitude of branched and unbranched mycelium tubes course towards the centre of the crust, to terminate in moniliform strings and masses of rounded or oval spores, rather larger on the average than those of the trichophyton.

TREATMENT.—The soil must be rendered less suitable for the growth of the fungus by administering good food, fresh air, cod-liver oil, blood tonics, etc. The eradication of the fungus present, especially on the scalp, presents great difficulties. The scalp must be thoroughly cleansed by keeping the hair shaved or cut short, by soaking the crusts in oil poultices, or by water packing, and by washing. For a choice of parasiticide remedies, we refer the reader to the treatment of chronic tinea tonsurans, and will only add that, after a cure is apparently effected, the case must be carefully watched for some months.

Tinea trichophytina, or "ringworm," is a term applied to designate the various forms of mischief occasioned in the skin and its appendages by the growth there of the *Trichophyton tonsurans* (Malmsten), and it embraces, as already explained, *Tinea trichophytina circinata*, or ringworm of the general surface; *Tinea t. tonsurans*, or ringworm of the scalp; *Tinea t. sycosis*, or ringworm of the hairy parts of the face; and *Tinea t. unguium*, or ringworm of the nails. These several forms may be met with on the same person, or in the different members of a family, or one variety may give rise by contagion or extension to another phase.

Tinea trichophytina, or ringworm, occurs in the rich as well as in the poor, and is propagated almost entirely by contagion, either by immediate contact, or by using infected articles of the toilet, clothing, and so on; but it is probable that the spores of the fungus are also disseminated through the air. It may also be contracted from cattle, horses, and domestic animals. At certain times it seems more prevalent than at others, and, when neglected, it occasionally runs riot in a village, or where children are congregated. The rapidity and the extent of its spread, and the length of its persistence, depend on the state of nutrition of the individual, some qualities of the fungus, and the amount of warmth and moisture present. Thus "lymphatic," toneless children, or the pallid and ill-nourished, who do not assimilate fats easily, are especially selected; and it is notorious that where the members of a family are affected in one or more, and these the least robust, the disease is very intractable. Then, again, *tinea circinata* flourishes with great luxuriance in the tropics, and the fungus contracted from animals excites much inflammation. *Tinea tonsurans* especially attacks children, from late infancy up to thirteen or fourteen years of age, and but rarely adults, though the latter more frequently contract *tinea circinata*. The fungus grows especially

between the lowest layers of the cuticle and the upper rete layers, and in chronic eczema marginatum, and in tropical ringworm, penetrates still deeper into the rete. Where hairs exist, and particularly on the scalp, the fungus grows down between the hair and the follicular wall; and, insinuating itself beneath the cuticle of the hair, ramifies up and down between the fibres. There it splits up and separates the fibres, and causes the brittleness, opacity, and distortion to be described. There is at present some uncertainty whether the growth of the fungus is limited to effete epidermic structures, or whether it may spread to the root sheaths, papillæ, and corium, for instance. It is absolutely necessary to be thoroughly acquainted with the character of the diseased hairs and skilled in the detection of this fungus,¹ which consists of wavy, smooth-margined, transparent mycelial tubes or threads, generally unbranched, jointed or unjointed, and generally in the hair, terminating in moniliform chains or rounded or oval transparent spores or cells, about half the diameter of a red blood-corpuscle. In *T. circinata* we see principally a network of simple and beaded mycelium in the upper layers of the skin, whilst in hairs spores predominate.

Tinea circinata usually begins as a little reddened, faintly raised, itchy, erythematous macule, which tends to enlarge by a well-defined raised border, and to clear in the centre, leaving only some pigmentation and desquamation.

¹ To demonstrate successfully the fungus in the skin, the deeper cuticular and upper rete cells should be scraped or cut from the spreading edge of *T. circinata*, or in a hair it should be carefully pulled out from the centre of a patch of *T. tonsurans*. The specimen should then be soaked for a short time in *weak* liquor potassæ, and spread out by the covering glass for microscopical examination. Fatty granules and globules, which may easily be mistaken for spores by the inexperienced, can be got rid of by first soaking the hair in ether.

The fungus grows amongst the epidermic structures, and excites more or less inflammation, according to the susceptibilities of the patient, and the irritating quality of the fungus. If the inflammation be slight, only an erythematous patch results; if more severe, sufficient effusion of serum may take place to form papules or vesicles, usually situated on the extending edge, and thus, in years gone by, the terms lichen and herpes circinatus came to be applied. The rings may attain to the size of a half-crown or five-shilling piece, or in the tropics to six inches diameter, and then seem to die away or remain as a chronic patch. There may be only one patch present, or a great number, and in the tropics, where the ringworm fungus flourishes with great luxuriance, a large area of the body may be patterned and festooned with confluent rings. In England, tinea circinata is a trivial though frequent affection, occurring mostly in children, and especially about the neck, face, and hands, and tending to disappear spontaneously. Several special phases must, however, be further noted. One form already referred to, and so common in the tropics, is variously described as *Chinese, Indian, Burmese ringworm, and Dhobies' itch*. It is ordinary ringworm, which assumes exaggerated characters from rapid and luxuriant and extensive growth. It is very common about the fork of the thighs, and occasionally intractable cases are seen in those who return to England from warm climates, and then shows as a chronic, itchy, recurrent, erythematous, papular, or desquamating eruption. So-called *eczema marginatum* is now recognized to be a chronic ringworm, which induces a condition closely simulating a patch of chronic eczema. It is usually met with about the inner and upper part of the thighs and neighboring parts, and also in the axillæ, and beneath hanging folds of skin. It commences as a red, itchy, scurfy spot, and on the thigh spreads by a raised border, often studded with papules, and, it is said, vesicles,

and assumes a circular outline. It gets excoriated and infiltrated, and is often most intractable. It will be seen from this description that the *diagnosis* is sometimes attended with difficulty, and, indeed, can only be made with certainty after a careful examination for the fungus. As a broad rule, we may say that all itchy circinate patches should excite the suspicion of ringworm, especially if localized and single; but it should be borne in mind, first, that the circinate character is one common to many skin diseases—*e. g.*, old psoriasis, lupus erythematosus, relapsing and late syphilides, mucular leprosy, and many erythema (*see* these diseases); and, secondly, that the circinate character is not present in the earlier stages, and tends to be lost in very chronic patches, and then comes to resemble old areas of eczema or artificial dermatitis, or psoriasis.

Tinea tonsurans, or “ringworm” of the scalp, seems to be far more common in Europe than in America, and is a never-failing source of annoyance to all concerned. Its usual beginning on the scalp is by one or more itchy, desquamating, or scurfy, more or less circular, and often reddened spots. The circinate aspect is sometimes presented, especially in infants, but is not a common feature, at any rate when the disease is well established. As the fungus grows in the cuticle and the patches enlarge, the hairs also become implicated and rendered brittle, and break off, causing a remarkable and characteristic “bald patch,” which attracts the attention of the patient’s friends, because it stands out in remarkable contrast to the surrounding hairy scalp. The fungus often spreads primarily from several centres, or at any rate soon becomes inoculated about the scalp by scratching, etc., and the various patches, varying from a half to several inches in diameter, tend to join and so affect extensive surfaces. These “bald patches” are usually of a grayish color, from the covering of fine scurf,

consisting of epidermic scales, sebum, and fungus, masking any congestion of the underlying tissues set up by the growth of the parasite. Over the diseased surface, the hairs might convey the impression of having been nibbled off close to the scalp, for they are stunted, swollen near the skin, opaque, and lustreless, often twisted and bent, loosened in the erected follicles, excessively brittle, and frequently surrounded by little whitish, asbestos-like sheaths, which they carry up on their shafts as they emerge from the follicle. There are a good many variations in appearance from this typical ringworm of the scalp, none of which, however, should pass unrecognized if the characters of the diseased hairs and the fungus be fully apprehended. Thus the diseased hairs may not be so very conspicuous on superficial examination, either from being mixed up with a large proportion of healthy hairs, or from being as yet unbroken (though brittle), and only lustreless, opaque, irregularly grown, and dwarfed. Then the degree of inflammation set up by the growth of the fungus varies a good deal, and the desquamation and congestion may be slight, or more or less pustular dermatitis may supervene to mask the hairs, either in discrete spots or over the whole patch, or seborrhœa may be excited and then the fatty plates cake down and conceal the hairs. Sometimes, by reason of the special susceptibility of the soil, or the irritating character of the fungus, a patch will spontaneously become swollen, boggy, tender, livid like a threatening abscess, and studded with the dilated mouths of inflamed follicles which exude a viscid serous fluid, a condition known as *Tinea kerion*, and not to be confounded with pustular ringworm. Lastly, too much stress must not be laid on the circular, much less the circinate, character of the patches, because not only does their coalescence destroy this, but the circular outline of individual patches is lost after a time.

Tinea sycosis is the term applied to ringworm of the hairy parts of the face, which is far more common in France and some other countries than in England and America, and the name *sycosis* has been borrowed because that quite distinct affection is closely simulated. In appearance it differs widely, according to the amount of inflammation excited; thus, it may resemble a tinea circinata, or the presence of acneiform papules and pustules may cause it to closely resemble ordinary sycosis, or the inflammation may be more intense, especially when contracted from cattle and horses, and large pustules, free crusting, general swelling, boils, nodules, and abscesses may form. It is often asymmetrical and very intractable. The hairs become affected exactly as in tinea tonsurans.

Tinea trichophytina unguium (*see* with *Tinea favosa unguium* under *Onychomycosis*).

TREATMENT.—The points to be kept in mind are (1) to influence the soil so as to render it in the least degree favorable to the fungus; (2) to destroy the parasite; (3) to remedy the consequences (baldness, inflammation) of the presence of the parasite, and of the destructive treatment employed. The first point is effected by subjecting the children to good hygienic conditions, and fresh or sea-side air, by regulating the food in proper proportions, and especially the fatty element, and by administering ferruginous preparations, cod-liver oil, etc. A great number of substances are parasiticidal, and the choice of one must be determined by the site of the disease, whether on the body or in the hairy scalp or beard, by its extent and duration, the age and susceptibilities of the patient, and so on. As the fungus in *T. circinata* does not extend, as a rule, below the uppermost rete layers, it is easily removed by the application of a blistering substance, or by setting up inflammation, and causing crusting or repeated free desquamation,

and this may be effected by painting on the part one or more times either blistering fluid, strong acetic acid (not glacial), or solution of nitrate of silver ($\frac{3}{j}$ to $\frac{3}{j}$), or tinct. or liniment of iodine, or perchloride of iron. Any crusts may be bathed off, and the raw surface dressed with a soothing salve. The disease is, however, easily cured by rubbing well in, twice daily, any of the following less irritating salves, viz., ungu. zinci sulphatis $\frac{3}{j}$ to $\frac{3}{j}$ (in infants), ungu. hydrarg. ammoniaci (one-quarter to one-half the strength of the Brit. Pharm.), ungu. hydrarg. nitratis ($\frac{3}{j}$ of ungu. nit. to $\frac{3}{vij}$ vaseline), ungu. acidi carbolici ($\frac{3}{j}$ to $\frac{3}{j}$), ungu. picis liquid., or Wilkinson's salve F. 106). Thymol and salicylic ointments (F. 80, 64) are effective, unirritating, and cleanly. Precipitated sulphur is one of the best applications (hydrargyri ammoniat., $\frac{3}{ij}$, ungu. sulph. ad $\frac{3}{j}$). Very chronic patches of *T. circinata* and *eczema marginatum* may prove obstinate, and require strong remedies thoroughly well rubbed in (F. 112, 122, 118, 33).

With regard to *T. tonsurans* it is necessary to remark that if the disease be extensive, the hair over the whole head should be kept cut short (save only a fringe); or if only one or two patches exist, the hair around them only should be removed. It must be borne in mind also that ringworm is contagious and gets inoculated about the scalp and general surface, so that a constant watch must be kept up for fresh places, and care be taken that the disease be not propagated from one to another by the interchange of caps, brushes and combs, towels, comforters, linen, etc. Further, it is well for the patient to wear a simple linen or other cap, constantly, which may be easily disinfected or destroyed, from time to time, both for the purpose of isolating the scalp and preventing the removal of the applications to the eyes, etc.

The difficulty in curing *T. tonsurans* will be according to the power of growth of the fungus, and the time it has

been at work. If the disease be *very recent*, any of the above-mentioned applications will suffice, as with *T. circinata*; but, if the fungus has spread down the follicles and into the hair nearly to the bulb, weeks and months of unceasing application of parasiticides will be necessary. If the disease be *extensive and diffuse*, rags soaked in a recently made saturated solution of sulphurous acid (F. 123) may be constantly applied under oil-skin caps, or carbolic glycerine (1 part of carbolic acid to 1 to 5 parts of glycerine) is a fairly good remedy, rubbed in several times a day. Oleate of mercury (F. 51), and F. 113, 122, 118, 119, 120, are amongst the very best of applications, and produce no ill results. The great point is to rub in the remedy selected as thoroughly and as frequently as possible, short of producing much inflammation.

When from the first, or in the course of time, we have to deal with *chronic localized patches*, we may resort to setting up pustular inflammation around the hairs, as the pus is inimical to the fungus, and loosens the hairs. With this view Coster's paste (F. 116), or lin. crotonis (B. Ph.), or F. 115, may be painted on, and the resultant crusts allowed to fall, or be torn forcibly off. The latter process introduces us to an additional help in *epilation*, or the extraction of diseased hairs, with suitable forceps—a tedious operation, which is of the greatest value, when the loosening of the hairs by irritant applications allows them to be *gently* dragged from the follicles with the shafts *unbroken*. Epilation is of especial value in favus and tinea sycosis. If the patch be rather too extensive to excite pustular inflammation for fear of the subsequent scarring, frequent paintings should be made with the lin. iodi or pigmentum iodi (twice the strength of tincture), or rubbing with Goa powder, the scalp having been previously wetted with dilute acetic acid. These methods of treatment may be advantageously alternated with one another.

For intractable patches not more extensive than half-a-crown, a further treatment has been introduced in the last few years, founded on the fact that in cases where *kerion* spontaneously arises, the disease rapidly cures itself by the fall of all the diseased hairs. This treatment then is to excite *kerion* (*see* the description of this condition) by daily application of croton oil, or, better, equal parts of croton oil and lin. crotonis, with persistent poulticing in between these paintings. The hairs may then be removed, and the boggy swelling rapidly subsides by constant bathing and soothing remedies. It only remains to say that it is absolutely essential to be thoroughly acquainted with the characters of ringworm stumps and the fungus to be able to distinguish them when sparsely disseminated about the scalp amongst healthy hairs, or when masked by seborrhœa, or pustular eczema, otherwise the most elaborate explanations will fail to bring out a correct diagnosis or knowledge as to when an old-standing case is cured.

Tinea versicolor (*Pityriasis versicolor vel Chloasma*) is characterized by the formation of more or less circular, fawn or liver-colored disks (dark brown occasionally), situated mostly about the hair-follicles, and due to the growth in the cuticle of the *microsporon furfur* fungus. They are, as a rule, very faintly elevated, frequently smooth and glistening, though the nail will readily disengage scales, and occasion so little discolouration or disfigurement that they are sometimes not very apparent, except in certain lights. The degree of discolouration varies very much, and there may be a pink hue present from hyperæmia. The disks spread peripherally and very slowly to coalesce into extensive, irregular areas, enclosing islands of normal skin, and eventually the characteristic circular spots are only traceable on the borders. It most commonly affects the warm moist epigastrium and sternal regions,

between the shoulders, and in course of time, if left undisturbed and the soil be favorable, it may extend on to the neck, round and down the trunk, and reach the thighs and upper part of the arms. It is essentially a disease of adults from twenty to fifty years of age, and its growth is favored by warm clothing and moist conditions of skin, and hence is more common in the delicate, especially the phthisical. Its spread is very chronic and insidious, and it is slightly contagious. It must be carefully distinguished from pigmentary stains (true chloasma) and *a fading roseolous syphilide*.

TREATMENT.—Most parasiticides will effect a cure, but they must be long persevered with or the disease will return. Ointments are most effectual for hospital practice, but in private practice it is well to thoroughly cleanse away all sebum and loose epithelium, by thoroughly washing with soap and hot water, and then to apply F. 67, 111, 58.

Teleangiectasis is the name applied to little capillary dilatations and new formations in the skin, either arising idiopathically or in connection with diseased states of the skin ; for instance, about the face in acne rosacea and about patches of morphœa. It is also applied in a rather different sense to the forms of capillary anginoma which spread, in distinction to the non-spreading nævus vascularis. (*See Nævus.*)

Ulcus Orientalis, or *Oriental Sore*, is a term which may be conveniently applied to embrace a number of boil-like inflammations or ulcers, bearing a close resemblance to one another, which are met with in tropical or sub-tropical regions, and variously known as Boutons de Biskara (Algeria), de Bagdad, d'Aleppo; Delhi, Mooltan, Lucknow, and Kandahar "sores;" Scinde and Lahore boils; Caneotica (Crete), etc.

There are many other ulcers known as Cochin China, Mozambique, and Natal sores, or ulcers, the exact nature of which is hardly clear, nor is their relation to yaws definitely settled. It has been established that under these terms a heterogeneous mass of affections has been included of a lupoid, syphilitic, malignant, and scrofulous nature. Moreover, people debilitated and cachectic under climatic conditions, mal-hygiene, and bad food, are extremely subject to furunculus and to ulceration following any wound or abrasion. But it nevertheless seems clear that there is a specific affection meriting a distinct description, and English troops in India have in times past been scourged by it. The affection commences by localized itching, and the formation of a firm pink papule, not unlike a mosquito-bite, and the hair and gland sacs seem to be specially involved. This papule, or nodule, as it enlarges gets more vascular and softer from effusion, and first of all desquamates, and then a scab forms (one to two months), under which ulceration goes on. The ulcer commonly reaches the size of a shilling, or half-a-crown, but there is much variation in the intensity of the ulceration. The ulcer is very chronic and often intractable, and lasts from four to eighteen months, or longer, but it is not dangerous. It gradually cicatrizes in the centre, and in healing leaves an indelible scar. There may be a dozen or more of these sores on the same person, and one may be surrounded by several others, and several may coalesce. It seems to occur only once in a lifetime. The commoner sites are the back of the elbow, forearms, backs of the hands and fingers, the ankles, face, legs, thighs. Unexposed parts are rarely attacked. It attacks all races, natives and Europeans, both sexes, and occurs at all ages. New-comers to a district are especially prone to take the disease, and in India it is confined to cities. The cause is not clear at present, but the sores are dependent probably on the peculiar chemical

character of the water. Some think it has a parasitic causation.

TREATMENT.—The most approved treatment seems to be to burn the sore out at an early stage if possible, for the ordinary local measures for the treatment of ulcers is futile. A thorough building up of the health is required in many cases; at least in cases coming to Europe this plan is most successful.

Urticaria, or Nettlerash, is characterized by the formation in the skin of circumscribed, soft, more or less rounded elevations known as *Pomphi* or *Wheals*, which have several remarkable characteristics, and which are well illustrated by the effects of the stinging nettle. These wheals are due to an acute œdema, very rarely copious enough to cause a bulla, implicating circumscribed areas, varying in size from a split pea or finger-nail to the palm of the hand, and are pink or a delicate red in color, with the central portion often blanched, when the œdema is sufficient to mask the greater part of the underlying hyperæmic redness. These wheals are of rapid formation and as characteristically evanescent, and they are intensely itchy and stinging. Though usually of rounded or oval outline, wheals may assume an annular character (*see Roseola urticata*), and then coalesce to form gyrate patterns on the skin. Their appearance is also altered by the depth to which the œdema extends in the skin, for they may form simple erythematous blotches or more rarely large pink subcutaneous swellings, and when in the loose connective tissue of the eyelids, lips, or pharynx they cause much distress.

Wheals are usually described as inflammatory, and urticaria is classified with the erythema. The immediate cause of the little areas of acute œdema seems to be a temporary paresis of vaso-motor nerve twigs, and this

paresis is brought about either by *external influences* operating on the skin, such as bites by bugs, lice, and fleas, the burrowing of the itch insect, the crawling of caterpillars, scratching (factitious urticaria), sea water, cold air, etc.; or, secondly, by *influences radiated from within the body*, such as the gastro-intestinal tract, the uterus, etc.; and, thirdly, probably by an impure blood current. There is no doubt that in urticaria there is a strong underlying neurotic element or unstable condition of the nervous system which must always be taken into consideration. Beyond this no definite cause can be made out in some cases, but the majority of patients are dyspeptic, debilitated, and out of sorts.

Urticaria may be marked by the presence of only a few wheals, or the whole body may be covered. They may occur in an *acute outbreak* accompanied by febrile disturbance, and considerable general trouble and prostration, and then are generally due to the ingestion of unwholesome food, such as particular kinds of fish (*e. g.*, mussels), tinned meat, etc., or articles of diet, such as strawberries, against which there exists a peculiar idiosyncrasy. *Chronic urticaria* is generally excited by some derangement of the alimentary tract, but in some cases it is traceable to uterine disorder, and it may occur in pregnancy. Some very chronic cases are seen in neurotic subjects, and periodical outbursts of wheals may occur.

Lastly, urticaria presents some difference in the adult and in the child, for in the former the wheals are almost always fugitive, and rarely leave pigmentation behind, whereas in infants it is somewhat more common, but still rare, for the wheals to be comparatively persistent and leave tawny stains, which quite mislead the uninitiated (*U. pigmentosa*). Again, in children, there is a common and troublesome form of chronic urticaria (*U. papulosa*), not due to insect bites, but commonly to chronic intestinal

or gastric disturbance, and long known as *lichen urticatus*, on account of the tendency there is in children for papules, due to little depositions of lymph, to be left behind by the fugitive wheal. It must be carefully distinguished from insect bites and scabies, as in cachectic children a multiform eruption is brought about by scratching, pus formation, etc.

TREATMENT must depend on the exciting cause, into which careful inquiry should be made. Thus, if due to some external agency, such as bugs, this must be removed. The *acute form* in the adult, due to the ingestion of particular kinds of diet, should be treated by an early emetic, and subsequently a sedative mixture of bismuth and hydrocyanic acid. In *chronic urticaria* of the adult, if not due to such a well-marked cause as pregnancy or ague, great care should be taken to try and find out any stomach, uterine, or liver derangement, or loss of nervous tone due to overwork, anxiety, etc. The dyspepsia may require an antacid, a mineral acid, or sedative, or some aid to digestion as pepsin; the nervous system may require a tonic or bromide of potassium, and so on. Dover's powder is often very effective in chronic cases. Arsenic and quinine are useful in periodic cases, and generally it may be laid down that, first, any obvious derangement of the health, as dyspepsia, should be set right and then the nervous system be toned up. In children, gastro-intestinal derangement is almost invariably the exciting cause, and the feeding must be carefully supervised. Locally, we may give relief by an evaporating or cooling lotion (F. 44, 15), or ointment (14), or astringent (F. 79, 13), or soothing application (F. 20-22, 65, 66, 83), or slight stimulant (F. 16, 19, 31, 57, 76, 77), or sedative (26). The tinct. saponis viridis et picis (F. 74), diluted with five parts of water, makes an effective lotion in *lichen urticatus*. Alkaline, or starch, or sulphuret of potassium baths (F. 1) are often very grateful.

Vaccinal Eruptions, or lesions of the skin dependent on the operation of vaccination, may be thus classified: (A) Unhealthy conditions of the pustules or wounds, which may consist in more or less diffuse erythema, erysipelas, ulceration, and rarely gangrene, and arising from want of cleanliness and proper protection of the part, the intensity of the local inflammation, or cachexia. (B) The inoculation of syphilis by the admixture of blood with the vaccine matter. In such a case the vaccine pustules do not run a typical course, but when they ought to be healed over, the sore, or region, begins to indurate. Possibly leprosy and yaws may be also inoculated thus. (C) General eruptions excited by the disturbance of the system. Thus, a *roseola vaccinia*, to be distinguished from measles and scarlatina, is not very uncommon, occurring about the time of maturation of the pustules. Similarly a general vesicular or pustular eruption is occasionally observed to be excited by the general disturbance, as in pyæmia, but it is not a disseminated eruption of vaccine vesicles, and the disease cannot be inoculated from it (so-called *vaccine généralisée*). In cachectic children these pustules may become gangrenous (*vaccinia gangrenosa*). Lastly, eczema, and psoriasis, and urticaria, may also be *excited* in those so predisposed, just as vaccination, by its alterative effects, will sometimes remove chronic eruptions.

Verrucæ, or Warts, are circumscribed hypertrophies of groups of papillæ associated with some overgrowth of immediately subjacent connective tissue, and more or less overproduction of epidermis. They range very commonly about the size of a split pea, and may be sessile or pedunculate. Only a few may exist, or they may appear in great numbers. They occur in both sexes, more especially in the young. As for the cause, it is often obscure; but certain ill-conditioned subjects seem to have a tendency

to them, whilst in others acrid discharges, or other irritation, seem to excite them. They vary somewhat in size and detail of appearance, according to their site, for on the hands they may be smooth or not much divided up, on the backs of old people flat and broad, on the face long and thread-like, and on the scalp spread out and digitate. Again, about the genitalia, and more rarely in other moist situations, warts are excited by irritating discharges, and often grow rapidly and luxuriously, and coalesce to form large offensive secreting masses. These vascular growths are known as *venereal warts*, *pointed condylomata*, or *verruca acuminata*, to distinguish them from the syphilitic condylomata (see *syphilitic papules*), and from "vegetating syphilides."

TREATMENT.—Common warts may be destroyed by repeated applications of glacial acetic acid, or chromic acid (F. 11), or by the stronger caustic potash (1 part to 3 of water), or acid nitrate of mercury (F. 9), taking care to protect the surrounding skin. If the tendency to their development is marked, arsenic is recommended, but all irritating secretions must be looked to. Non-syphilitic venereal warts should be kept scrupulously clean, and dusted with calomel or some disinfectant astringent powder (F. 90 *et seq.*). If not relieved, they may be snipped off with scissors, or, if very vascular, ligatured, or removed by the galvano-caustic wire, and the bases touched with nitrate of silver.

Xanthelasma, or Vitiligoidea, is a disease characterized by the formation of either sharply defined, slightly raised, smooth, soft patches or streaks of a lemon, cream, or buff-yellow color like chamois leather imbedded in the skin (*X. planum*), or of "tubercles," or nodules of various sizes from a pin-head to a walnut (*X. papulatum et tuberosum*). The larger patches are formed by the aggregation

and fusion of the smaller papules, and, when formed, either remain stationary or increase, but rarely disappear, and show no tendency to inflame. Clinically there are two main sets of conditions under which this affection occurs, as follows: *X. palpebrarum* is a fairly common affection, not in the young, but of the middle and senile periods of life, in women mostly, and begins almost invariably about the inner canthus, and especially the left, as little discrete papules, which later generally become aggregated into flat patches to form a crescent. Next the outer canthus is similarly and independently affected, and finally the upper lid and then the lower lid may be almost entirely encircled, and usually on both sides. Some sebaceous glands may be prominently involved and plugged in the patches, and occasionally cysts form. Mr. Hutchinson, from an analysis of seventy-four cases, concluded that people suffering from *X. palpebrarum* have been especially prone to sick headaches, bilious attacks, and other evidences of functional disturbance of the liver (not jaundice), and that the patches are predisposed to by any cause capable of producing dark areolæ round the eyes (? pigmentation or venous congestion)—e.g., pregnancy, ovarian disorder, liver derangement, or mere nervous fatigue. He also relates two cases in this category preceded by jaundice and enormous enlargement of the liver, which subsequently subsided. This form may exist in several members of a family and in successive generations.

In *X. multiplex* or *xanthelasma of the general surface*, of which about twenty-five cases are on record, though it is of somewhat more frequent occurrence than this statement suggests, the papules, streaks, and patches usually first form in the eyelids, though the latter may remain unaffected, and later in the natural folds and creases of the palms, and then those of the face, neck, ears, scrotum, soles of the feet, flexures of the abdomen, the cleft of the

nates, and the back. In very chronic cases—and the progress of the affection is very slow—projecting tubercles, nodules, or phymata may form. Maculae have also been found in the mucous membrane of the mouth, lips, tongue, palate, trachea, bile-ducts, etc. This general form has almost invariably been preceded by long-continued, often recurrent, jaundice, arising from an organic cause—viz., simple and cancerous stricture of ducts, cirrhosis, occlusion by gall-stones and hydatids, and chronic liver atrophy; and rarely by diabetes. The ages varied from twenty-eight to fifty-eight, though one case was only sixteen. Several remarkable cases, however, are on record in which the affection was not associated with jaundice, and began in infancy; but though, in the case of two brothers (Startin, Stephen Mackenzie) there was little clue to the cause, in the others (Colcott Fox) there were remarkable bone changes of a gouty or rheumatic nature. There is some difference of opinion as to the exact nature of the changes. The corium, however, is at first the seat of a chronic inflammatory exudation of leucocytes, or of a new growth rich in young cells, and the latter become distended with a yellow oil, either as the result of a degenerative process, or as a true deposit, for it appears that the cell elements themselves persist. In the tuberose eruption the cells and intercellular matrix become organized into a new growth of connective tissue.

TREATMENT.—When once formed, the patches persist, and there is no known method of getting rid of them by medicines. Should they cause annoyance, or be painful or irritable, they are easily dissected out.

Xeroderma. (*See Ichthyosis and Angioma.*)



PART III.

CUTANEOUS PHARMACOPÆIA.

BATHS.

1. BATHS are used for cleansing purposes, to remove scales and crusts to allow of the application of other remedies, to soothe irritable skins and relieve itching, to lessen inflammation and soften the parts, to stimulate the skin and resolve infiltration, and to destroy parasites. The quantity of water in a bath is estimated at *thirty gallons*, and the temperature should be from 90° to 95° F.

(a) SOOTHING AND EMOLlient BATHS.—The quantities of substances to be used are either—of *bran*, 2 to 6 lbs.; of *gelatine*, $\frac{1}{2}$ to 3 lbs.; of *size*, 2 to 4 lbs.; of *linseed*, 1 lb.; or of *starch*, 1 lb. The starch should be beaten through a small quantity of the water before the bath is filled up. Useful in many inflammatory and irritable diseases.

(b) An ALKALINE BATH is made with from $\frac{3}{4}$ to $\frac{5}{6}$ of *carbonate of soda* or *potash*, or $\frac{3}{4}$ of *borax*. It is sometimes useful to add *bran liquor*, made by infusing bags of bran in hot water. For children, a nice bath is made by using $\frac{1}{4}$ to $\frac{1}{2}$ lb. of *soft soap*. Useful in *urticaria*, *chronic eczema*, *psoriasis*, *lichen*, *prickly heat*, and *prurigo*, where there is irritation or collection of scales and infiltration. In *ichthyosis*, to remove the caked mass, a stronger bath is often necessary.

(c) An ACID BATH is made with $\frac{3}{4}$ of nitric or muriatic acid, or an $\frac{3}{4}$ of each. Used in chronic *lichen* and *prurigo*,

and sometimes of value in *urticaria*, to relieve intolerable itching.

(d) A SULPHURATED POTASH BATH has $\frac{3}{4}$ ij to $\frac{3}{4}$ iv to each bath, and is anti-parasitic, stimulant, and anti-pruritic. The late Mr. Startin's compound sulphur bath has $\frac{3}{4}$ ij of sulphur (præcip.), $\frac{3}{4}$ j of hyposulphite of soda, and $\frac{3}{4}$ ss of dilute sulphuric acid, mixed first of all in a pint of water. To this 2 lbs. of gelatine or size may be added. Used in *itch*, *phthiriasis*, *extensive body ringworm*, *chronic eczema* and *psoriasis*, *lichen*, and *urticaria*.

(e) TAR BATH.—Tar the skin thoroughly, and then remain in a *warm* bath for from three to six hours. This procedure, carried out each day, is effective in some cases of *prurigo*, and *chronic infiltrated eczema* and *psoriasis*.

(f) PROLONGED OR CONTINUAL WARM BATHING has been found useful in some cases of *pemphigus*, *pityriasis rubra*, *general eczema*, and *prurigo*. A patient can live altogether in a bath, only leaving it for relief of the bowels, etc.

(g) WET PACKING is sometimes useful in removing scales or crusts or ichthyotic masses.

FUMIGATION.

2. To administer a MEDICINAL VAPOR BATH, heat is to be applied simultaneously to the drug and a small tray of water, so that steam and the vapor of the drug may arise together and surround the patient's naked body. Such an apparatus may be improvised with a chair and blankets, but can be obtained at a small cost at an instrument maker's.

For mercurial fumigation 20 to 30 grains of *pure calomel* are volatilized, and the duration of the bath should be about fifteen minutes. *Localized calomel fumigations* by means of a special apparatus are of great use in some

obstinate local syphilides. For a *sulphur fumigation*, from 1 to 2 ounces of sulphur should be used. Patients so treated should carefully avoid exposure to cold, and when treated at home can rest for a while enveloped in a blanket.

CAUSTICS.

3. GLYCERINE OF IODINE.—R Iodi, potassii iodidi, $\frac{3}{4}$ ss; glycerini, $\frac{3}{4}$ j. M. (Anderson.) To be painted on a patch of *erythematous lupus* once or twice daily for several days according to the effect produced, and protected by gutta-percha tissue. It is painful.

4. ARGENTI NITRATIS, gr. xv; sp. æther. nit., $\frac{3}{4}$ j. M. (To be kept excluded from the light.) Used in very chronic eczema, *psoriasis*, *ringworm*, *spreading erysipelas*, and especially *pruritus vulvæ*. With equal parts of water, silver nitrate forms a mild caustic for *erythematous lupus*.

5. CHLORIDE OF ZINC PASTE, MIDDLESEX HOSPITAL.—R Zinci chloridi, $\frac{3}{4}$ j; farinæ tritici, $\frac{3}{4}$ ij vel q. s.; liq. opii sedat. vel aquæ, $\frac{3}{4}$ j. M. A good caustic to be applied spread on linen rag to limited surfaces to complete the removal of disease after cutting or scraping, viz., in *lupus*, *cancer*, or *rodent ulcer*.

6. HEBRA'S MODIFICATION OF COSME'S ARSENICAL PASTE.—R Arsenici alb., gr. v; cinnabar (hydrarg. sulphuret. rub.), gr. xv; ung. emoll., $\frac{3}{4}$ ij. M. To be applied thickly, spread on linen, to *non-ulcerated* forms of *lupus* for three days, renewing the application every twenty-four hours. It may be used also to other *new growths*.

7. VIENNA PASTE (Potassæ c. Calce).—R Potassæ causticæ, calcis vivæ, $\frac{3}{4}$ ss, sp. vin. rect. q. s. ut fiat pasta. Used to small areas of *lupus*; to be spread on linen, and kept applied for ten minutes, care being taken to protect the healthy skin by adhesive plaster.

8. POTASSÆ FUSÆ, aquæ, $\frac{aa}{3}$. M. This caustic causes a rather deep slough, extending beyond the exact area to which it has been applied.

9. FUMING ACID NITRATE OF MERCURY.—R Hydrargyri, $\frac{3}{j}$; acidi nitrici (sp. grav. 1.40), $\frac{3}{ij}$. M. To be kept stoppered. A very powerful caustic; to be applied with a glass rod.

10. HYDRARGYRI IODIDI RUBRI, gr. x- $\frac{3}{j}$; glycerini, $\frac{3}{ss}$ (or equal parts of the two ingredients may be used). M. A favorite French application in *lupus* especially.

11. ACIDI CHROMICI, gr. Ix; aq. destillat., $\frac{3}{iv}$. M. A superficial caustic used for destruction of *warts*. A solution of ten grains to the ounce of water is very valuable to heal syphilitic inflammation of the tongue.

GENERAL APPLICATIONS.

Alum.—12. R Pulv. aluminis, gr. xx-xl; (pulv. zinci sulphatis, gr. x-xx); glycerini, $\frac{3}{j}$; aquæ rosæ ad $\frac{3}{vii}j$. M. ft. lotio. An astringent used in the *erythema*, *chronic intertrigo*, and *acne rosacea*.

13. An ointment which is useful in *seborrhœa*, is made by the addition of x-xx grains of alum to $\frac{3}{j}$ of benzoated zinc ointment, to which an equal quantity of borax may be added.

Ammonia.—14. R Ammoniæ hydrochloratis, gr. xx; unguiculi zinci benzoati ad $\frac{3}{j}$. Used in *urticaria*.

15. R Liquoris ammon. acetatis, $\frac{3}{ij}$; acidi hydrocyanici dil., $\frac{3}{j}$; tinct. digitalis, $\frac{3}{ij}$; aq. rosæ ad $\frac{3}{vii}j$. M. ft. lot. Or the same with sp. vini rect., $\frac{3}{ss}$, substituted for the hydrocyanic acid and digitalis. Cooling lotions in *pruritus*, *urticaria*, *erythema*, etc., where the skin is unbroken.

Atropine.—16. R Atropiæ salphatis, gr. j; boracis, ʒij; glycerini, ʒss; acidi hydrocyanici dil., ʒj; aq. flor. aurantii, ʒij; aq. destillat. ad ʒxij. A lotion useful *to allay itching* where the skin is unbroken.

17. Or, Ung. atropiæ, ʒij; acidi hydrocyanici dil., ʒj; ung. cetacei ad ʒj. M. ft. ung.

Belladonna.—18. R Extr. belladonnæ, ʒss; acidi hydrocyanici diluti, ʒss; glycerini, ʒj; aq. ad ʒxiv. A lotion used to soothe irritable papular and phlegmonous eruptions. (Startin.) Useful also in *dysidrosis* and *herpes*.

Benzoic Acid.—19. R Acidi benzoici, gr. xl; boracis ʒj; glycerini, ʒiss; aq. ad ʒvj. A useful lotion to relieve itching in *urticaria*.

Bismuth is a very valuable sedative, and useful in many inflamed and itching conditions.

20. UNG. BISMUTHI OLEATIS (McCall Anderson).—R Bismuthi oxidi, ʒj; acidi oleici pur., ʒvij; ceræ albæ, ʒij; vaselini, ʒix; olei rosæ, m.v. M. ft. ung. One of the most healing of salves.

21. R Bismuthi subnitratis, ʒij; liq. plumbi diacet., ʒss, vel P. zinci oxidi, ʒj; vaselini ad ʒj. M. ft. ung.

22. R Bismuthi subnitratis, ʒij; acidi hydrocyanici dil., ʒij; emulsionis amygdal. amar., vel aq. camph., vel aq. laurocerasi, vel aq. sambuci ad ʒvij (if the hydrocyanic acid is retained, to be used to unbroken skin). Used in the early inflammatory stages, and as a sedative in *lichen planus*.

Boracic or Boric Acid and Borax.—23. R Boracis, ʒij; morphiae hydrochloratis, ʒj; acidi hydrocyanici, ʒj; glycerinæ, ʒj; aq. rosæ ad ʒvij. (McGrath.) To be applied after ablution with a soft sponge, night and

morning, in *pruritus vulvæ* and other forms of *pruritus*. Meigs recommends a somewhat similar lotion with borax, $\frac{3}{ss}$, and sulphate of morphia, gr. viij to $\frac{3}{viij}$ of water.

24. R Boracis $\frac{3}{ij}$; sodæ carbonat., $\frac{3}{j}$; glycerini, $\frac{3}{iss}$; acidi hydrocyanici diluti, $\frac{3}{ss}-\frac{3}{ij}$; aq. sambuci ad $\frac{3}{vj}$. Used in *acne*, *seborrhœa*, and to relieve *itching*.

25. UNG. ACIDI BORACICI MOLLIS, an antiseptic and slightly stimulant salve. R Acidi boracici, $\frac{3}{j}$; ceræ albæ, $\frac{3}{ss}$; aq. destill., $\frac{3}{ss}$; paraffin, $\frac{3}{ij}$; ol. amygdal., $\frac{3}{ij}$. M. sec. art. (Messrs. Sandford and Blake.) The last four ingredients melted together must be added to the very finely pulverized acid in a hot mortar, and incessantly triturated together till the mass is cold. Messrs. Savory and Moore, to avoid any irritation caused by particles of the acid, have prepared, at Dr. Thin's suggestion, a stable homogeneous cream, by dissolving the acid in glycerine and incorporating it with a fatty basis of white wax and almond oil. Mr. Martindale also prepares three excellent varieties of this ointment.

Camphor and Chloral.—26. R Camphoræ, chloral. hydratis, $\frac{\alpha\alpha}{ss} \frac{3}{j}$; rub down thoroughly together until liquid, and incorporate with pulv. amyli $\frac{3}{j}-\frac{ij}{ij}$ to make a dusting powder, which must be kept tightly corked in a wide-mouthed bottle.

27. Or mix with ung. aquæ rosæ, $\frac{3}{j}$.

28. Or dilute with $\frac{3}{j}$ or more water to form a lotion. (Bulkley.) These applications are *anti-pruritic*. Chloral is a powerful solvent and dissolves the alkaloids—*e. g.*, with the lotion above mentioned morphia gr. v may be incorporated (*chloral glycerite of morphia and camphor*).

29. R Pulv. camphoræ, gr. viij; tinct. conii, $\frac{3}{ij}$; ung. simplicis ad $\frac{3}{j}$. (Neligan.) Anti-pruritic camphor is a good remedy to check the *burning heat of eczema*. (See F. 90.)

30. R Camphoræ, 3ss-3j; sp. vin. rect., 3j; boracis, 3ij; aq. rosæ ad 3vij. A stimulant lotion useful to *allay itching*.

Carbolic Acid.—31. R Acidi carbolici, gr. x-3j; solve cum glycerin, q. s.; ung. zinci, 3j (Liveing and Neumann), or the acid may be conveniently made up with glycerine of starch. Carbolic acid is one of the best anti-pruritic remedies; it is also antiseptic and germicidal. In strong preparations it is an irritant, and even in weak preparations a stimulant. When applied very strong it is anaesthetic. It is used for *pruritus*, *prurigo*, *psoriasis*, *lichen planus*, *infiltrated chronic eczema*, and *parasitic affections*, etc., and it is freely miscible with water (gr. $\frac{1}{2}$ - $4\frac{1}{2}$ to 3j), glycerine (see F. 112), alcohol and fats (ol. carbolici acidi, 1 in 60, for *pediculosis*).

32. R Acidi carbolici, mxx; ol. ricini, 3iv; sp. vini rect., 3iss; ola. mygdal. amar., miv. (Duhring.) Used in *seborrhœas* when not too actively inflamed, and after the scalp has been cleansed from crusts.

Chrysophanic Acid.—33. R Acidi chrysophanici, gr. v-3ij; vaselin ad 3j. Used as a stimulant and alterative in *psoriasis* and some other chronic diseases, also as a *parasiticide* in ringworm. *Goa powder* contains 80 per cent. or 90 per cent. of this acid, which stains the hair and skin and linen, and may set up an erysipelatoid inflammation, especially about the head, and conjunctivitis. In ringworm the surface should be wetted with acetic acid, and then the powder rubbed thoroughly in.

Collodion.—34. R Collodion flex. (B. Ph.), 3j, amyl. hydride, 3j;aconitiæ, gr. j; veratriæ, gr. vj; M. ft. applicatio. (Lackerstein.) **Amyl Colloid.**—To be brushed over the painful part—e. g., *herpes*, five or six times a day, and protected by spongioline if necessary.

Gurgun Oil.—35. Messrs. Savory and Moore have prepared the following ointment and lotion, which are much more satisfactory than the usual lime-water liniment.
 R Ol. dipterocarpi (gurgun oil), ʒvj; vaselin, ʒiv; ceræ albæ, ʒij; ol. bergamii, ℥x; ol. limonis, gtt. x. M. ft. ung.

Iodine.—36. *Pasta Amyli et Iodi.*—R Pulv. amyli, part j; glycerine, parts ij; aquæ, parts vj. Boil together, and when nearly cold add sol. iodi, part j. A valuable paste for *cleansing foul sores*, especially in *lupus* and *syphilis*.

Iodoform.—37. This anti-pruritic, stimulant, and healing powder may be dusted on sores alone or mixed with tannin or fuller's earth; or used as an ointment (gr. v-xx to ʒj) of vaseline or ung. petrolei, to which a little balsam of Peru may be added, or dissolved in 6 to 12 parts of ether, alcohol, warm oil, or eucalyptus, or collodion. It is very efficacious in *indolent and chronic ulcers*, whether *specific, malignant, or otherwise, condylomata, cracked nipples, glandular swellings, lupus, ringworm*, and to dry up *purifluous surfaces*.

38. Godlee recommends iodof., gr. x; ol. eucalypti, ʒss-ʒj; vaselin, ʒj; as a dressing in *lupus* after erosion.

Lead.—39. UNG. PLUMBI OLEATIS (Sawyer) is made by thoroughly incorporating 1 part of oxide of lead with 8 parts of oleic acid, and then 24 parts of this lead oleate with 14 of heavy and inodorous paraffin oil. It is not so good a sedative as the oleates of bismuth and zinc.

40. R Ung. plumbi carbonat. (B. P.), ʒj; zinci oxidi, ʒj; cetacei ad ʒj; ol. olivæ q. s. ut fiat ung. mollis. (Neumann.) A soothing and astringent ointment, especially useful in *irritable seborrhœa*. Chloroform, ℥iv, may be added to allay *pruritus*.

41. The UNG. PLUMBI COMP. of the old London Pharmacopœia is a very good ointment for *chronic eczema*.

42. UNG. DIACHYLI ALBI (Hebra).—R Olei olivæ opt., ʒ xv; lithargyri, ʒ iij et ʒ vj; coque s. a in ung. molle, dein de adde ol. lavandulæ, ʒ ij. This ointment is very difficult to prepare of the proper light yellow buttery consistence. Messrs. Ferris and Co., of Bristol, prepare an exceedingly good modification of this ointment as suggested by Eisner.

43. Martindale's modification (UNG. VASELINI PLUMBI-CUM), made by thoroughly dissolving together and incorporating equal parts of emplast. plumbi and vaseline, furnishes a *bland emollient for inflamed surfaces*. Balsam of Peru, tar, etc., may be added to make a stimulant for *chronic eczema*, and *psoriasis*, especially of the palms.

44. LIQ. PLUMBI DIACETATIS may be painted on *erythematous lupus*. When much diluted (m v to ʒ j of rose water or decoction of poppy-heads, etc.) it is used as an astringent and sedative to inflamed surfaces, whether broken or not, and as an anti-pruritic. In stronger solutions, with spirits of wine or borax and glycerine, it is used as a stimulant face wash (milk of roses).

45. R Liq. plumbi diacet., ʒ ss; vitelli ovorum duorum; aquæ sambuci (B. P.), Oj. Used in *seborrhœa* and *acne* of the face.

46. R Liq. plumbi diacet., ʒ j (zinci oxidi, ʒ ij); tinct. hyoscyami vel vin. opii, ʒ ij; mist. camph. vel decoct. papaveris ad ʒ vijj. Used in *pruritus*, *eczema*, *herpes*, *erythema*, etc.

47. R Liq. plumbi subacetat., ʒ ss; vin. opii, ʒ ss; ung. sambuci ad ʒ j. (Liveing.) Used in *irritable eczema*, *herpes*, etc.

48. GLYCERITUM PLUMBI SUBACETATIS, or Glycerole of the Subacetate of Lead (Squire).—R Plumbi acetatis, parts v; lithargyri, parts 3½; glycerine, parts xx. Heat for half an hour in a boiling glycerine bath, constantly stirring, and filter in a gas oven; when a clear and perfectly colorless liquid is obtained, to be diluted with a little

glycerine and rose water for use as a lotion, or with vaseline for an ointment. A slightly stimulant and astringent application for *chronic eczema*, but it is not anti-pruritic, and does not resolve infiltration.

Lime Water.—49. Lin. calcis, ol. olivæ, &c. A useful application for subacute inflammation. A little salicylic acid may be added for antiseptic purposes, or some carbolic acid.

Mercury.—50. R Calomelanos, ʒj (camphoræ, ʒss; sp. vin. rect., q. s.); vaselin ad ʒj. Used in *pruritus ani et vulvæ*, and in *syphilitic ulceration*. A good dusting powder for *condylomata* is formed by equal parts of calomel and magnesia.

51. The oleate of mercury 5 per cent., 7½ per cent., 10 per cent., and 20 per cent. Valuable as a local application for *syphilides*, or for inunction. (Bumstead preferred the 20 per cent. preparation mixed with an equal weight of simple cerate.) It is one of the best remedies for *chronic ringworm*, and Dr. Alder Smith mixes with it one-seventh part of acetic ether, or, to avoid any inflammatory effects, recommends the mixture of 10 per cent. of the oleate with 90 per cent. of heavy petroleum oil. Morphia may be added in painful conditions.

52. R Hydrargyri ammoniati, gr. v; ung. zinci benzoati, ʒj. A very valuable astringent to dry up limited purulent secreting surfaces in *impetigo from pediculi*, *impetigo contagiosa*, and *ecthyma*. It is also a good *parasiticide for lice*, and it may be strengthened as required up to the Pharmacopœia strength, and balsam of Peru, carbolic acid, etc., be added. With liq. carbonis detergens, m̄ v, it is useful in *seborrhœa*.

53. An ointment of six grains of white precipitate and the red oxide of mercury to the ounce of lard constitutes

the *ung. mercuriale co.*, of Startin; much used for *psoriasis*, *seborrhœa*, *syphilides*, *chronic scaly eczema*, and *sycosis*, but gr. xxx of each may often be used with advantage in *ringworm*.

54. UNG. HYDRARGYRI NITRATIS (B. Ph.) made with vaseline is largely used in various strengths (one-half or more diluted) as a stimulant and alterative to limited patches of *psoriasis*, *chronic eczema*, *ringworm*, *lousiness*, and many other diseases. (See F. 113.) Balsam of Peru and oil of cade may often be usefully combined with it.

55. R Hydrarg. nitratis, ʒj; hydrarg. nitric. oxidi, ʒj; ol. rusci, ʒiss; ung. zinci benzoat., ʒss. (Anderson.) Used as above.

56. R Hydrarg. bichlor., gr. vj; acid. hydrochlor. dil., ʒj; aq., ʒiv; sp. vini rectif., aq. rosæ, ȳā ʒij; glycerine, ʒj. (White and Hyde.) To be applied at night to remove *tan* and *freckles*, and *chloasma*, and washed off with soap in the morning. The amount of the bichloride may be carefully increased.

57. R Hydrargyri bichloridi, gr. iij; acidi hydrocyanici dil., ʒij; mist. amygdal. amaræ, ʒvijss. (A. T. Thomson.) Tinct. benzoin, chloride of ammonium, spirits of wine or of camphor, may be substituted for the hydrocyanic acid. Used in *acne*, *urticaria*, *pruritus*, *lichen planus*, and *syphilides*.

58. R Hydrargyri bichloridi, gr. xij; saponis mollis, ʒij; sp. vin. rect., ʒiv; solve et adde ol. citronellæ, ʒj. Rub night and morning as firmly as possible into the eruption caused by *tinea versicolor*, short of causing pain. (Anderson.) Valuable also when rubbed in by the medical man himself after epilation in *favus* and *ringworm*, and in weaker solution in *animal parasitic diseases*.

Morphia and Opium.—59. R Morphiæ sulphatis, gr. vj; sodæ biboratis, ʒss; aq. ad ʒvijj. Used in various forms of *pruritus*.

60. R Liq. morphiæ hydrochlorat., $\frac{3}{2}$ iss; liq. potassæ, $\frac{3}{2}$ j; glycerin, $\frac{3}{2}$ j; aq. laurocerasi, $\frac{3}{2}$ j; aq. sambuci ad $\frac{3}{2}$ xij. Used in *pruritus*—e. g., that due to *lichen planus*.

61. R Pulv. opii, plumbi acetatis, $\frac{3}{2}$ $\frac{1}{2}$ j; ung. stramonii ad $\frac{3}{2}$ j. (Bulkley.) To be applied after a cold hip bath in *pruritus ani*, especially if dependent on piles, and in *P. vulvae, herpes*, etc.

b Naphthol is a product of the distillation of tar, introduced as a substitute for tar in *psoriasis*, *pruritus*, *prurigo*, *lichen planus*, *scabies*, etc. It is far more agreeable, but highly stimulant.

62. R *b Naphthol*, parts iij; cretæ præparat., parts ij; saponis mollis, parts x; adipis, parts xx. M. ft. ung. for hospital use. (Kaposi.)

Pyrogallic Acid.—63. R Acidi pyrogallici, part j; adipis, parts x. M. ft. ung. A stimulant salve employed in *psoriasis* especially, *but only to limited surfaces*. Cleanlier than chrysophanic acid, but less effective.

Salicylic Acid.—64. R Acidi salicylici, $\frac{3}{2}$ ss- $\frac{3}{2}$ j; vaselini ad $\frac{3}{2}$ j. A non-irritating, antiseptic, and inodorous salve used in *eczema*. It is also of some value in *ringworm*, and an alcohol solution is a cleanly remedy for *tinea versicolor*. Camphor combines with salicylic acid.

Soda.—65. R Soda carbonatis, $\frac{3}{2}$ ss; succi conii, $\frac{3}{2}$ j; aq. sambuci ad $\frac{3}{2}$ vj. Used to allay itching in *eczema*, *lichen*, *urticaria*, *miliaria*, and *pruritus*.

66. R Soda bicarbonatis, $\frac{3}{2}$ j; glycerini, $\frac{3}{2}$ iss; aq. sambuci, $\frac{3}{2}$ vjss. Used in similar conditions. Hydrocyanic acid, cherry-laurel water, and borax may be added.

Soft Soap.—67. *Spiritus Saponatus Kalinus* or *Kali-crème* (Hebra). R Saponis viridis,¹ ʒij; sp. vini rect., ʒj; solve et dein filtra, adde sp. lavand. ʒij. A stimulant alkaline lotion, used as a resolvent wash in *acne*, *seborrhœa*, and *sebaceous lupus*, to remove the sebaceous plugs and dissipate the infiltration: also in *chronic eczema* and *psoriasis* (see F. 74).

Sulphur.—68. R Soda hyposulphitis, ʒj; aq. ad ʒj. A valuable parasiticide lotion in *tinea versicolor* and *tinea unguium*; also useful in *pruritus vulvæ*.

69. R Lactis sulphuris vel sulphuris præcip., ʒij; aetheris, ʒss; sp. vini rectif., ʒij; glycerini, ʒij; aq. rosæ ad ʒvj. To be dabbed on in *indolent acne* and *acne rosacea*, and if much stinging is produced, to be washed off after a few moments.

70. R Sulphuris hypochloridi, ʒj–ʒij (potassæ carbonat., gr. x); adipis ad ʒj; ol. amygdal. amar., gtt. x. (Wilson.) A stimulant ointment for *acne* and *rosacea* and *infiltrated syrosis*, to be rubbed in at night.

71. R Sulphuris iodidi, gr. x–ʒj; adipis ad ʒj. A highly stimulant salve used in *acne*.

72. R Lactis sulphuris, glycerini, sp. vini rect., potassæ carb., aetheris sulph., aa. M. ft. pasta. (Zeissl.) To be rubbed at night into parts affected with *comedo* until a slight redness is produced.

(See also the special remedies for parasitic diseases.)

Tar and its derivatives are widely used in skin diseases for their stimulating and anti-pruritic effects; they are also supposed to check cell growth. They cannot be used to

¹ This green soap varies much in composition usually. Messrs. Roberts & Co., of New Bond Street, make a trustworthy compound containing four per cent. excess of potash.

acute inflammations, and discolor the skin of the face. *Pix liquida*, or Wood Tar, derived from *Pinus palustris* and other species, and *Pix Mineralis vel Litanthracis*, or Coal Tar, are the two kinds in common use; but Guyot's Solution of Wood Tar, *Oleum Rusei*, an empyreumatic oil obtained from the bark of the *Betula alba*, and *Oleum Cadini* (*Huile de Cade*) or *Ol. junip. empyreum.*, the product of dry distillation of the wood of *Juniperus oxycedrus*, and Wright's *Liquor Carbonis Detergens*, or alcoholic solution of Gas Tar, are much employed in private practice, as more cleanly and with less smell. The *Ung. Picis* (B. Ph.) is an effective but dirty remedy for hospital use, but the preparations noticed above may be made with lard, etc., into more cleanly ointments and lotions (see also F. 62).

73. GLYCEROLE OF TAR (Brady).—℞ Glycerine, ʒvj; picis liquid., ʒvj; pulv. amyli, ʒij. Warm the glycerine, stir in the starch, add the tar, and raise the mixture rapidly to boiling point; strain through a cloth, if necessary, and stir whilst cooling. A dark brown mass, of the same strength as *ung. picis* liquid. (L. Ph.), but perfectly smooth, soft in consistence, and less difficult to cleanse away.

74. TINCT. SAPONIS VIRIDIS CUM PICIS (Hebra).—℞ Saponis viridis, ol. cadini vel picis liquidæ, vel Guyot's solution of tar, sp. vini rect. vel aq. cogniensis, aa ʒj. M. ft. tinct. sec. art. It can be scented with oil of lavender or rosemary (ʒj), and is used as a stimulant and resolvent application in *psoriasis*, in *infiltrated eczema*, and *erythematous lupus*, and *prurigo*, etc. Diluted with aqua ʒv, it forms an excellent lotion for *lichen urticatus*.

75. ℞ Acidi carbolici, ʒj; glycerini amyli, ʒss; ol. cadini, ʒij; adipis ad ʒj. A stimulant ointment in *psoriasis*, *eczema*, *lichen planus*, *prurigo*, etc. In increasing the quantities of carbolic acid and oil of cade, a sufficient quantity of white wax must be added to make the ointment firm.

76. R Liq. carbonis deterg., 3ij-3j; glycerine, 3ij; aq. rosæ ad 3vij. A stimulant used in *chronic itching conditions* of skin.

77. R Liq. carb. deterg., 3ss; acidi nitrici diluti, 3j; aq. camph. ad 3vij. To be sponged over irritable parts and then dried off with soft linen. (Startin.) Especially useful in *pruritus* and *lichen planus*.

78. LIQUOR PICIS ALKALINUS (Bulkley).—R picis liquidæ, 3j; potassæ causticæ, 3j; aq. destillat., 3v. Dissolve the potash in the water, and gradually add and rub down the tar in a mortar. To be used diluted from 3j-3ij to aq. Oj in the *intolerable itching* of many diseases. An ointment may be made by adding 3j-3ij to adeps 3j.

Tannin.—79. R Acidi tannici, 3j; vaselin, 3j. M. ft. ung. The glycerine of tannin (B.P.) diluted is also, with the ointment, useful in *seborrhœa*.

Thymol.—80. R Thymol, gr. xx-3j; solve in vaselin, 3j. M. ft. ung. Used as a stimulant antiseptic in *psoriasis*, *chronic eczema*, and *ringworm*. The crystals are irritating. When rubbed down with chloral hydrate or camphor, it liquefies, and then does not separate out in crystals on the addition of water.

81. R Thymol, 3ss; chloroform, 3ij; ol. olivæ ad 3j. (M. Morris.) A mild remedy for recent *ringworm*.

Turpentine.—82. R Ol. terebinthinae, ol. limonis, aa. A stimulant remedy for *psoriasis* and *ringworm*.

Zinc.—83. R Pulv. calaminæ ver., 3ij; pulv. zinci oxidi pur., vel cretæ præp., 3j; glycerin. pur., 3ss; aq. rosæ ad 3vj. A lotion of wide application to soothe inflammatory affections, to dry up slight discharges, to partially hide a disfiguring eruption, or allay *pruritus*. It may be variously

modified by adding hydrocyanic acid ($\frac{3}{j}$), or half the rose water may be replaced by liq. calcis or lotio nigra.

84. WILSON'S UNG. OXIDI BENZOATUM ZINCI (Bell's Formula).—R Adipis preparati, $\frac{3}{v}$; gummi benzoini pulveris, $\frac{3}{j}$; liquefac. cum leni calore, per horas viginti quatuor, in vaso clauso; dein cola per linteum, et adde oxidi zinci purificati, $\frac{3}{j}$. Misce bene et per linctum expime. A widely used slightly astringent salve for inflamed surfaces. Spirits of camphor, $\frac{3}{ij}$ to the $\frac{3}{j}$ of salve, may be added to allay the burning irritation of *eczema*. On uncovered parts it forms a white crust, which the following does not.

85. BULKLEY'S ZINC OINTMENT.—R Pulv. zinci carbonat. pur., $\frac{3}{ss}$; ung. galeni (cold cream), $\frac{3}{j}$. M. ft. ung. A good mild astringent and sedative for uncovered parts especially.

86. UNG. ZINCI OLEATIS (Crocker).—R Pulv. zinci oxidi pur., $\frac{3}{j}$; acidi oleici (as free as possible from palmitic acid), $\frac{3}{viij}$; vaselini, $\frac{3}{ix}$. Stir thoroughly together the oxide of zinc and oleic acid, allow to stand for two hours, heat gently in a water bath, till the zinc oxide is completely dissolved, and when cold make into a soft ointment with the vaseline. One of the most soothing and emollient of salves, and useful in all inflammatory conditions, especially where the cuticle is abraded.

PLASTERS.

87. EMPLASTRUM FUSCUM.—R Camphor., $\frac{3}{ss}$; picis burgund., $\frac{3}{vj}$; ceræ flav., $\frac{3}{ix}$; plumbi oxid. rub., $\frac{3}{ij}$; ol. olivæ, $\frac{3}{iv}$. To be melted together till a little burned. Used for *boils*.

88. EMPLASTRUM HYDRARGYRI (Neumann).—R Hydrarg., $\frac{3}{v}$; ol. terebinth., $\frac{3}{ij}$; ceræ flav., $\frac{3}{ijj}$; emplast.

plumb., ʒiss. Used to resolve nodules of *syphilis*, *lupus*, and *acne rosacea*, and stimulate unhealthy *syphilitic ulcerations*. The formulæ for emplast. hydrarg. vary much. It can be weakened by compounding equal parts of emplast. hydrarg. and emplast. saponis.

89. EMPLASTRUM DE VIGO VELEMPL. HYDRARG. COMP.
—℞ Hydrargyri, ʒij; olei terebinthinæ, ℥xx; ceræ flavæ, gr. xx; resinæ, gr. xl; styracis, ʒj; emplastri plumbi, ʒj. Much used by the French as above.

DUSTING POWDERS.

A great variety of substances may be used as dusting powders—*i.e.*, for cooling, drying up, and protecting moist surfaces, and relieving heat and itching. The oxide and carbonate of zinc, alum, and the aluminous earths (Fuller's earth), powdered maize, wheaten starch, rice powder, lycopodium pollen, talcum venetum, carbonate of magnesia, French chalk, carbonate of bismuth, etc. The "violet powders," so widely employed, were originally made chiefly of the rounded, smooth, absorbent granules of starch; but of late years many deleterious compounds (crystalline and otherwise) have been introduced under this title. Taylor's Cimolite and Curtis' Pasma are reliable preparations.

90. ℞ Pulv. zinci oxidi, ʒj; pulv. amyli, ʒvij. M. (Pulv. camphoræ, ʒj, may be added to allay burning heat.) Starch rapidly takes on an acid reaction, and should always be mixed with oxide of zinc, carbonate of magnesia, etc.

91. ℞ Pulv. acidi salicylici, ʒij (pulv. aluminis exsiccati, ʒiv); pulv. zinci oxidi vel zinci carbonat. præcip., ʒiv; pulv. amyli, ʒij. The alum may be omitted when the surface is much abraded.

92. ℞ Acidi salicylici, part j; pulv. gummi tragacan., parts ij; pulv. amyli, parts iij. To be dusted on in *urticaria*.

93. R Camphoræ, ʒss; sp. vin rect., q. s.; pulv. talci, pulv. zinci oxidi, Ȑā ȝij. To be made in small quantities, and kept in a stoppered bottle, and sprinkled on inflamed surfaces—e. g., in acute eczema, occasionally. (McCall Anderson.)

Messrs. Woolley, of Manchester, prepare an excellent antiseptic powder, containing boracic acid (*sanitary rose powder*), and Martindale's oleate of zinc powder can be usefully mixed with starch and one five-hundredth part of thymol. (See also F. 26 and 50.)

SPECIAL STIMULANTS FOR THE SCALP.

94. R Tinct. cantharid., ȝvj; glycerini, ȝij; tinct. nucis vomicæ, ȝss; aceti destillat., ȝss; aq. rosæ ad ȝvj.

95. R Liq. ammoniæ fort., ȝj; olei amygdal. dulcis, ȝj; sp. rosmarini, ȝiv; aq. mellis, ȝij.

96. R Tinct. cantharid., ȝj; liq. ammon. fort., ȝij; ol. macis express., ȝij; ol. amygdal. dulcis, ȝj; aq. rosæ ad ȝvij.

The above are for wide application over the scalp; for *alopecia areata* the following are more effective:

97. R Tinct. canthar. (vel tinct. capsici); glycerin, Ȑā. To be mopped in thoroughly twice daily.

98. R Tinct. canthar., tinct. capsici, Ȑā ȝss; ol. ricini, ȝj; aq. cologniensis ad ȝij.

99. R Ol. croton. tiglii, ȝss; lin. crotonis (B. Ph.) ad ȝj.

100. R Aceti canthar., ȝj; ung. hyd. oxidi rubri, vaselin, Ȑā ȝss.

101. R Balsami tolutani, gr. cxx; ol. rosmarin., ȝxx; tinct. canthar., ȝiv; ol. ricini, ȝj; adipis præparat., ȝj. M. ft. ung. The balsam should be dissolved in the smallest possible quantity of chloroform, and gradually stirred in with the other ingredients, which have just previously been melted together. To be brushed smartly in the scalp night and morning.

DEPILATORY.

102. R Barii sulphureti, ʒiss: zinci oxidi, ʒvj; carmine, gr. j; aquæ q. s. ut pasta fiat. Smear over the surface, wash off in three minutes, when the hair comes away also. (Anderson.)

REMEDIES FOR SCABIES AND PHTHIRIASIS.

103. SCHNEIDER'S MODIFICATION OF VLEMINCKX'S SOLUTION.—R Sulphuris sublimat., ʒij; calcis vivæ, ʒj; aquæ fort., ʒxx; coque ad remanent, ʒxij, dein filtra. A slightly caustic orange-colored fluid, much used in Belgium for *scabies*, and useful in *inveterate acne of the back*, *psoriasis*, and *prurigo*.

104. R Petrolei (commercial), ʒiij; ol. olivæ, ʒiss; bals. Peruv., ʒijss. Apply freely in *pediculi capitidis*, and confine with a flannel cap. (Kaposi.) *Common kerosene oil* has also been recommended.

105. HARDY'S MODIFICATION OF HELMERICH'S OINTMENT.—R Sulphuris sublimat., partes duo; potassæ carbonat., partem unam; adipis, partes duodecim. M. ft. ung.

106. HEBRA'S MODIFICATION OF WILKINSON'S OINTMENT.—R Sulphuris præcip., olei cadini, Ȑā ʒvj; saponis viridis, adipis, Ȑā Ȑbj; cretæ præp., ʒiv. M. ft. ung. Much used at Vienna for *scabies*. To be rubbed in night and morning for forty-eight hours, and allowed to remain on the skin for one week before a bath is taken.

107. R Sulphuris sublimat., ʒss; hydrarg. ammoniati, gr. iv; creasoti, ȝiv; olei anthemidis, ȝx; adipis ad ȝj. M. ft. ung. (Tilbury Fox.) A mild but good remedy for *scabies* and *phthiriasis*.

108. R Sulphuris sublimat., ʒss; bals. Peruvianæ, ʒss; adipis ad ȝj. M. ft. ung. (Duhring.) Used in the *scabies of children*.

109. R. *Styracis liquidæ*, $\frac{3}{j}$; *adipis*, $\frac{3}{ij}$. Melt and strain. (Anderson.) A clean, pleasant, unirritating remedy for the *scabies of children*, or where much inflammation exists.

110. R. *Pulv. staphisagriæ*, $\frac{3}{j}$; *adipis*, $\frac{3}{iv}$. Digest together for three hours and strain and add *ol. roris*, *gtt. x*; or *olei staphisagriæ*, $\frac{3}{j}$; *adipis*, $\frac{3}{j}$. M. ft. ung. Used in *phthiriasis*. (See also F. 31, 52, 62, 122.)

REMEDIES FOR VEGETABLE PARASITIC DISEASES.

111. GLYCERATE OF BORATE OF SODA.—*Pulv. sodæ biboratis glycerini*, aa partes 100. Triturate together in a glass mortar, or with gentle heat, until the solution is complete. (Gandolphe.) Especially useful in *tinea versicolor*, applied several times a day.

112. CARBOLIC GLYCERINE.—*Acidi carbolici liquefact.*, *glycerini*, aa . This is too strong for many skins, and the carbolic acid should be further diluted, even to one in five, according to the extent of diseased surface, and the age and susceptibility of the skin of the child. A cleanly, penetrating remedy for ringworm, to be rubbed in thoroughly two or three times daily.

113. *Acidi carbolici pur.* (Calvert's No. 2), *ung. sulphuris*; mix thoroughly without heat, and add *ung. hydrarg. nit.* (free from uncombined nitric acid). The proportions must be adjusted according to the age of the patient and the extent of the disease. Equal parts of each may be rubbed in night and morning to children over eleven years of age, and for a child under five begin with four parts of sulphur ointment to one part of each of the other ingredients, increasing the proportions of the latter, especially the citrine ointment, with the age of the child and the

diminution in extent of the patches. (Alder Smith.) A very good remedy in *tinea tonsurans*.

114. UNG. CREASOTI (Squire).—R Creasoti, ʒij; ceræ albæ, ʒj. Solve. An irritant ointment, useful also in *psoriasis*.

115. R Creasoti, ʒj; acid. acet. glacial., ʒvij; M. ft. applic. To be painted on with a brush. The crusts which form may be bathed off, or forcibly detached to drag out diseased hairs. Mr. Morrant Baker uses an application of iodine, ʒij, dissolved in creasote, ʒj.

116. COSTER'S PASTE.—R Iodinii, ʒij; ol. picis liquid. (colorless oil of wood tar) ad ʒj. M. ft. applic. To be painted on with a stiff brush till a crust forms, which, when dry, should be removed with some force, if possible, and then the paste should be reapplied.

117. R Ung. iodi, ʒijj; acidi carbolici, ʒj; ung. sulphuris ad ʒj. M. ft. ung.

118. R Tinct. vel lin. iodi, ol. cadini, creasoti, ȳā. M. ft. applic.; or sulphur may be substituted for the creasote in an ointment.

119. R Cupri sulphatis vel subacetatis, gr. x-xxx; ol. cadini, ʒijj; (sulphuris præcip., ʒijj; hydrarg. ammoniat., gr. v-xx); adipis ad. ʒj. M. ft. ung.

120. R Liq. epispastici, ʒj; zinci sulphatis vel cupri sulphatis, gr. xx-ʒij; gallæ pulv., ʒj-ij; (bals. Peruv., ʒiss); vaselin ad. ʒj. M. ft. ung.

121. R Hydrargyri sulphat. flav. (turbith mineral), gr. xv-xxx; vaselin, ʒj. M. ft. ung. An irritant application.

122. UNG. SULPH. Co.—Sulphuris sublimat., lbss; hydrarg. ammoniat., hydrarg. sulph. c. sulph., ȳā ʒss; læviga simul, dein adde olei olivæ, ʒiv; adipis recentis, ʒxvj; creasotonis ȝxx. Misce. Useful also in *scabies* and *phthiriasis*.

123. R Acidi sulphurosi recentis (sat. sol.), part j; aquæ, partes ij–iv. M. ft. lotio. Used in all the tinea. (See also F. 33, 37, 51 to 58, 64, 68, 75, 80, 81, 82, 106.)

INTERNAL REMEDIES.

Only a limited number of prescriptions are here presented, and those mostly of a special character, and such as are not to be found for the most part in the general hospital pharmacopœias. The doses, unless otherwise specified, are for adults.

Mercury.—124. R Hydrargyri bichloridi, gr. $\frac{1}{16}$ – $\frac{1}{8}$; acidi hydrochlor. dil., ℥v; aquæ ad $\frac{3}{2}$ j. To be taken twice or thrice daily, after meals. To this the tinct. ferri perchlor., ℥x–xx, or liq. arsenici hydrochlor., ℥ijj, may be added, if necessary.

125. R Hydrargyri bichloridi, ammoniæ muriatis, $\ddot{\text{a}}$ ā gr. ijj; tinct. cinchon. comp., $\frac{3}{2}$ ijj; aq., $\frac{3}{2}$ ijj. (Bumstead.) *Dose*—From a teaspoonful to a tablespoonful two or three times daily.

126. R Hydrargyri bichloridi, gr. $\frac{1}{2}$; pulv. opii, gr. $\frac{1}{8}$; conf. rosæ, q. s. M. ft. pil. (Samaritan Hospital.)

127. MIST. HYDRARGYRI IODIDI (Startin).—R Hydrargyri bichloridi, $\frac{3}{2}$ j; potassii iodidi, $\frac{3}{2}$ vj; tinct. iodi comp., $\frac{3}{2}$ ij; aq. q. s. ad $\frac{3}{2}$ xvj. M. $\frac{3}{2}$ j contains $\frac{1}{2}$ gr. of bichloride and gr. iij of iodine.

128. R Hydrargyri bichloridi, gr. $\frac{1}{16}$; potassii iodidi, gr. iv; decoct. sarsæ comp. ad $\frac{3}{2}$ j.

129. R Hydrargyri biniodidi (rubri), gr. $\frac{1}{12}$ – $\frac{1}{6}$; ext. gentian, gr. $\frac{3}{2}$ ijss (or pulv. glycer., gr. j; syrapi, ℥j). One pill twice daily. The red iodide is much more active than the green iodide.

130. SYRUP OF THE IODURETTED BINIODIDE OF MERCURY.—R Hydrargyri biniodidi, gr. j; potassii iodidi, $\frac{3}{2}$ j;

aquæ, $\frac{3}{j}$. Filter through paper, and add syrpi, $\frac{3}{v}$. A tablespoonful for a dose. A favorite form in Paris.

131. R Hydrargyri protoiodi (virid.), gr. $\frac{1}{2}$ -1; pulv. opii, gr. $\frac{1}{4}$ (vel ext. hyoscyam.); ext. gentian., q. s. One pill twice daily. This is a favorite remedy with many.

132. R Hydrargyri bicyanidi recentis, gr. $\frac{1}{20}$ - $\frac{1}{10}$; quiniæ disulphatis, gr. j; ext. gentianæ, gr. $1\frac{1}{2}$. One, two, or three times a day.

133. R Pilulæ hydrargyri, gr. ij; ext. opii gr. $\frac{1}{2}$ - $\frac{1}{4}$ (vel ext. hyoscyam.). Quiniæ disulphas and ferri sulphas exsic. may be combined with blue pill and made up with treacle.

134. R Pulv. hydrargyri cum creta, pulv. Doveri, gr. ijss; conf. rosæ q. s. M. ft. pil. (University.) For children, one or two grains of "gray powder" may be given twice or thrice daily in *hereditary syphilis*.

Mercury and Arsenic.—135. *Donovan's solution, or liq. arsenici et hydrargyri iodidi, m̄x-xx with bark.* In *chronic syphilis* and other *chronic diseases*.

Iodide of Potassium.—136. R Potassii iodidi, gr. v; ammon. carbonat., gr. iij (tinct. calumbæ, $\frac{3}{ss}$; aq. ad $\frac{3}{j}$); vel decoct. sarsæ comp. ad $\frac{3}{j}$. The ammon-citrate of iron, or tartarated iron, or bicarbonate of potash, may be associated with the iodide as occasion requires. The dose of the iodide may be gradually increased up to gr. xxx or more, freely diluted with water, and taken on a full stomach. If ill borne, the sodium salt may be tried.

137. R Potassii iodidi, gr. v; syr. ferri iodidi, $\frac{3}{j}$. M. ft. mist.

Iodine.—138. R Iodi, gr. xxiv; amyli, $\frac{3}{j}$. Triturate the iodine with a little water (not spirit), and gradually add the starch until a uniform blue-black color is pro-

duced, and then dry with a *gentle* heat. A full teaspoonful freshly prepared in a draught of water thrice daily.

Arsenic.—139. R Liq. Fowleri, $\frac{3}{2}$ iss; ferri et ammon. citratis, $\frac{3}{2}$ j; tinct. nucis vom., $\frac{3}{2}$ ij; tinct. cinchon. comp., $\frac{3}{2}$ iv. (Bulkley.) A teaspoonful after meals.

140. R Vin. ferri, $\frac{3}{2}$ iss; syrupi simplicis vel zingiberis, $\frac{3}{2}$ ss; liq. Fowleri, gtt. xlviij; aq. destillat. ad $\frac{3}{2}$ vj. A tablespoonful twice or thrice daily, well diluted after meals. The dose of arsenic may be carefully increased. Children bear arsenic remarkably well, and it may be given conveniently in cod-liver oil or in any of the iron syrups.

141. R Liq. potassæ arsenit., $\frac{3}{2}$ ij; ammon. carbonat., $\frac{3}{2}$ ss; potassæ acetatis, $\frac{3}{2}$ j; syrupi, $\frac{3}{2}$ ss; aq. ad $\frac{3}{2}$ xij. A tablespoonful in a wineglass of water thrice daily after food. (Anderson.) The effects of arsenic with an alkaline diuretic.

142. R Liq. arsenici hydrochlor., $\frac{m}{2}$ ijj-vijj; acidi hydrochlor. dil.. $\frac{m}{2}$ v; tinct. ferri perchlor., $\frac{m}{2}$ x-xx; aq. ad $\frac{3}{2}$ j. Twice or thrice daily after meals.

143. R Acidi arseniosi lævig., gr.v; pulv. acaciæ, $\frac{3}{2}$ ss; pulv. cinnamon. comp., $\frac{3}{2}$ ijj; glycerin, q. s. ut fiat pilulas c (pil. arsenical. comp.). One or two pills daily after meals. (Blackfriars' Skin Hospital.)

144. R Acidi arseniosi, gr. j; quiniæ disulphat., gr. xx-xxx; ferri sulph. exsic. vel ferri redact., gr. xl-lx; ext. lupuli, gr. x; ext. gentian., q. s. Misc bene et divide in pilulas xvij vel xx. One twice a day after a meal. Used in *chronic skin diseases with debility*.

145. R Soda arsenias, gr. ij; ext. lactucæ, gr. xx (ferri sulph. exsic., gr. xx); ext. nucis vom., gr. iij. M. et divide in pil. xxiv. One pill two or three times daily.

Sulphide of Calcium.—146. Should be given several times daily in the form of pills (varnished) containing gr. $\frac{1}{10}-\frac{1}{2}$.

Tar.—147. R Picis liquidæ, gtt. iij–xv. In treacle thrice daily in *chronic eczema* and *psoriasis*, or it may be taken in capsules or in a pill—*e. g.*, R Picis liquidæ, ʒij; pulv. glycyrrhizæ, q. s. Divide in pill ix. (Anderson.) Two pills to be taken thrice daily.

Chaulmoogra and Gynocardic Acid.—148. The oil is best given in perles, or ten-minim doses may be given in milk or cod-liver oil. Gynocardic acid (Cottle) may be given in pills thrice daily, thus: R Gynocardic acid, gr. $\frac{1}{2}$; ext. gent. vel ext. lupuli vel conserv. rosæ, gr. iij; gradually increasing the dose.

Gurgun Oil.—149. R Ol. gurgun, ʒv; tr. quillæ, ʒj et ʒiv; pulv. tragacanth., ʒij; sacchar. alb., ʒiv; ess. limonis, mxx; tinct. limonis, ʒj; aq. ad ʒx. M. ft. emulsionem. *Dose:* A drachm to half an ounce twice daily.

Cannabis Indica.—150. R Tinct. cannab. Ind., m v –xx; mulilaginis, ʒj; aq. ad ʒj. To be taken every four hours to control intense itching. A pill may be made also with the extract (gr. $\frac{1}{4}$ –gr. j).

DIET IN SKIN DISEASES.

THERE are one or two observations to be made on this subject that may be of use in the management of these diseases.

First.—A distinction must be made between the diet of the private and hospital patient. The latter often only requires to be well fed up and his disease then speedily goes ; the former, on the other hand, often needs to have a check put on the quantity and quality of his food, but both need due attention to be paid to their excretory functions, that they be not sluggish.

Secondly.—In young children, skin diseases often arise *directly* from defective alimentation, as in the case of eczema ; and it is frequently the case that the child, the subject of eczema, intertrigo, or psoriasis, has not a sufficient supply of *milk*, either from excessive dilution or otherwise ; or the child is being nursed by a weakly mother.

Thirdly.—The regulation of the diet, setting aside the question of quantity or quality, is, as a rule, needed not so much to directly influence the skin disease as certain states of the general health, which modify the particular disease present ; for instance, to meet dyspeptic, gouty, and rheumatic conditions especially, but particularly the former ; and the mode in which these act prejudicially upon skin diseases has been referred to in Part I. of this work.

In dyspepsia in connection with eczema, acne, psoriasis, lichen, or congestion of the face, it is advisable, especially if the urine be very acid, to avoid sugar, tea, coffee, alcoholics, beer, raw vegetable matter, unripe or uncooked fruit, veal, pork, seasoned dishes, pastry, cheese, pickles, and the coarser kinds of vegetables, but especially all articles whose use is followed by heat or flushing of the face, and by flatulence or the like. Milk, the common meats, a light kind of bread, and some very sound light wine should be the diet of dyspeptic patients, whose skins are at all in a state of irritation. In very many cases the stomach is at fault at the outset, and a careful regulation of the diet is of the utmost importance as an aid to the other means adopted to correct faults in other parts of the system. This implies on the part of the practitioner the possession of an accurate knowledge of the characteristics of the various forms of gastric, intestinal, and hepatic functional diseases, which is indeed most necessary to a successful dealing with a great number of skin troubles.

In the case of gouty subjects the above remarks apply with special force. As regards stimulants, a good light claret, or whiskey in Vals water, is the best beverage.

In strumous subjects, the diet should consist of as much fatty matter as possible.

Fourthly.—In children who suffer from ringworm, it is desirable to give as much fatty matter as possible, by means of milk, cream, eggs, and fat meat if they can eat it.

Fifthly.—In syphilis, the greatest care should be taken to avoid anything beyond the most moderate use of stimulants; their abuse in this disease is a source of the greatest aggravation; otherwise the diet should be *nutritious*.

Sixthly.—In all cases in which the onset or early stage of a skin disease is *accompanied by febrile disturbance*, however slight, or in which the disease is very hyperæmic, stimulants should be avoided, and the plainest and simplest diet ordered. In marked cases of this kind, a milk diet for a while is often found to be very beneficial.

Seventhly.—In some cases in which the skin is very *hyperæmic*, this condition is much increased by the ingestion of food, especially if dyspepsia exists, in consequence of the sympathy existing between the stomach and the part of the skin affected. This state of things is especially marked in such diseases as acne, congestion of the face, and non-parasitic sycosis. Stimulants must be avoided, except they be diluted with some alkaline water: the use of a diet appropriate to the dyspepsia must be rigorously enforced.

Eighthly.—It is said that psoriasis requires an ample meat diet; but the patient must be dieted, and not his disease—*i. e.*, the diet should be plain and nutritious, and adapted to the constitutional peculiarities of the individual according to circumstances.

Ninthly.—In all cases where a skin disease has become chronic, and where there is debility, the patient should be allowed a full, unstimulating diet.

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